HCD-XB33K/XB44K

SERVICE MANUAL

E Model

Photo: HCD-XB44K

*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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CD Section	Model Name Using Similar Mechanism	HCD-D290/ G3300/XB3
	CD Mechanism Type	CDM37L-5BD29AL
	Base Unit Name	BU-5BD29AL
	Optical Pick-up Name	KSS-213D/Q-NP
Tape Deck Section	Model Name Using Similar Mechanism	HCD-D290/ G3300/XB3
	Tape Transport Mechanism Type	TCM-220WR2

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 8 ohm loads, both channels driven, from 70-20,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 0.9 % total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

(HCD-XB33K)
The following measured at AC 120/240 V, 50 Hz
DIN power output (Rated):
100 + 100 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (Reference):
120 + 120 watts
(6 ohms at 1 kHz, 10% THD)
Peak music power potput (Reference):
1,500 watts
(HCD-XB44K)
The following measured at AC 120/240 V, 50 Hz
DIN power output (Rated):
120 + 120 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (Reference):
140 + 140 watts
(6 ohms at 1 kHz, 10% THD)
Peak music power output (Reference):
2,000 watts

Inputs

PHONO IN (phono jacks):
sensitivity 3 mV, impedance 47 kilohms
MIX MIC (phone jack): sensitivity 1 mV, impedance 10 kilohms
VIDEO/MD (AUDIO) IN (phono jacks):
sensitivity 250 mV, impedance 47 kilohms

Outputs

PHONES (stereo phone jack):
accepts headphones of 8 ohms or more
VIDEO/MD (AUDIO) OUT (phono jacks):
voltage 250 mV, impedance 1 kilohm
SPEAKER: impedance of 6 to 16 ohms
SURROUND SPEAKER: accepts impedance of 16 ohms
(HCD-XB33K)

— Continued on next page —

COMPACT DISC DECK RECEIVER

MICROFILM

SONY®

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ = 780nm). Emission duration: continuous
Laser output	Max. 44.6µW* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Wavelength	780 – 790 nm
Frequency response	2 Hz – 20 kHz (±0.5 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB

CD DIGITAL OUT
(square optical connector jack, rear panel)

Wave length:	600 nm
Output level:	– 18 dBm

Tape player section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	60 – 13,000 Hz (±3 dB), using a Sony TYPE I cassette 60 – 14,000 Hz (±3 dB), using a Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range (2 band model)	
Antenna	FM wire antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	531 – 1,602 kHz (with the tuning interval set at 9 kHz) 530 – 1,710 KHz (with the tuning interval set at 10 kHz)
Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

General

Power requirements	
Other models:	110 – 120 V or 220 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	
(HCD-XB33K):	240 watts
(HCD-XB44K):	250 watts
Dimensions (w/h/d)	Approx. 355 x 425 x 435 mm (14 x 16 3/4 x 17 1/4 in) incl. projecting parts and controls
Mass	Approx. 14.0 kg (30 lb 14 oz.)
Supplied accessories:	AM loop antenna (1) Remote RM-SD70S (1) Size AA (R6) batteries (2) FM wire antenna (1) Speaker cords* (HCD-XB44K) (2)

Design and specifications are subject to change without notice.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

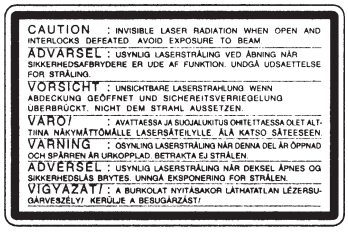
Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

The following caution label is located inside the unit.


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG UBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

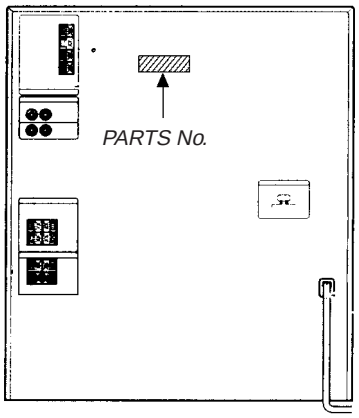
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

MODEL IDENTIFICATION

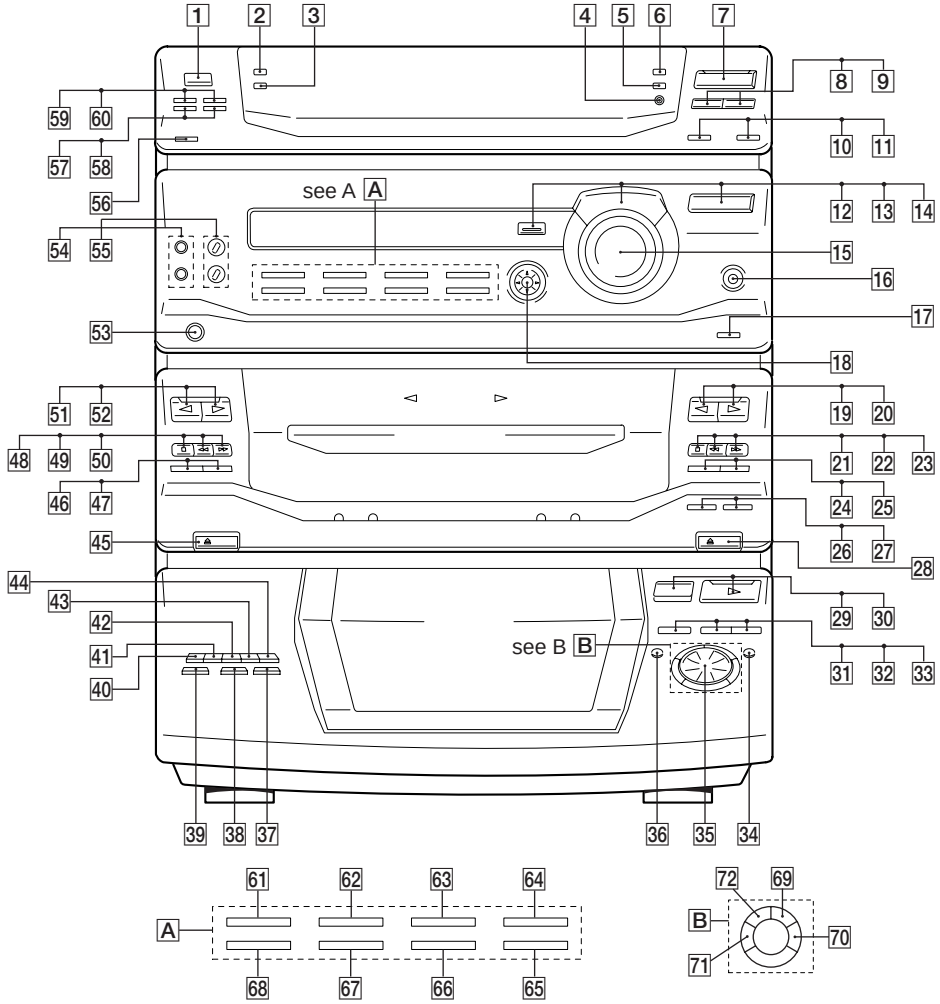
– BACK PANEL –



MODEL	PARTS No.
XB33K: SP, MY model	4-996-410-1☐
XB33K: E model	4-996-410-6☐
XB33K: EA model	4-996-410-7☐
XB44K: SP, MY model	4-996-412-1☐
XB44K: E, IA model	4-996-412-6☐
XB44K: EA model	4-996-412-7☐

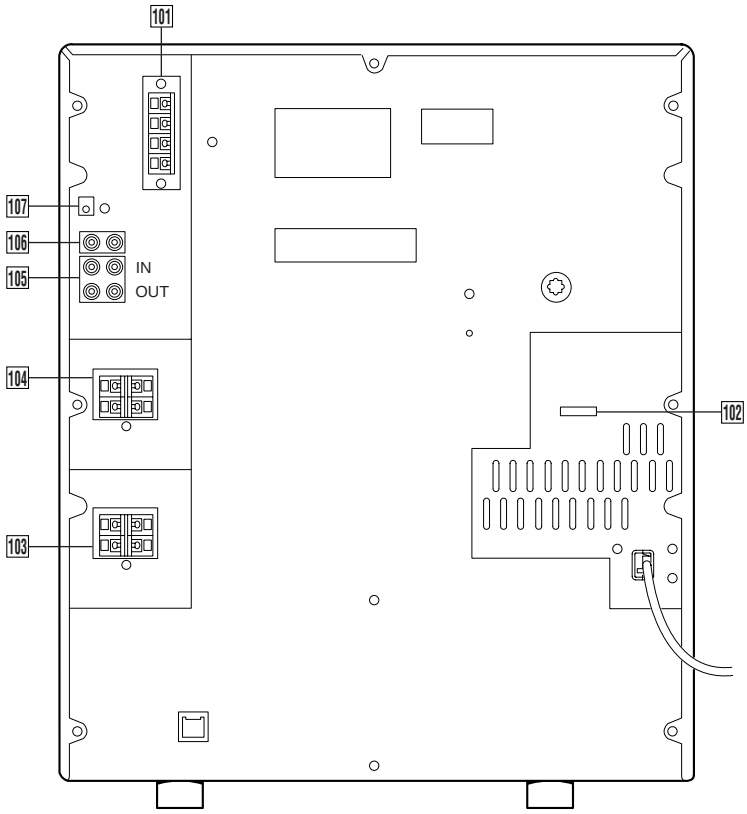
SECTION 1
GENERAL

– FRONT PANEL –



1 POWER button
2 DISPLAY/DEMO button
3 SPECTRUM ANALYZER button
4 ENTER/NEXT button
5 TUNER MEMORY button
6 TUNING MODE button
7 TUNER/BAND button
8 TUNING – button
9 TUNING + button
10 PTY button (AEP, UK model)
11 STEREO/MONO button
12 EFFECT button
13 GROOVE button
14 FUNCTION button
15 VOLUME knob
16 SUPER WOOFER button
17 SUPER W MODE (XB44K model)
18 GEQ button
19 DECK B ◁ (play) button
20 DECK B ▷ (play) button
21 DECK B ■ (stop) button
22 DECK B ◀◀ (backward) button
23 DECK B ▶▶ (forward) button
24 DECK B ❚❚ (pause) button
25 DECK B ● REC button
26 H SPEED DUB button
27 CD SYNC button
28 DECK B ⏏ EJECT button
29 CD ⏏ OPEN button
30 CD ▷ (play) button
31 DISK SKIP button
32 CD ❚❚ (pause) button
33 CD ■ (stop) button
34 CD ▶▶ (forward) button
35 ⏮◁◁ AMS ▷▷⏭ knob
36 CD ◀◀ (backward) button
37 FLASH button
38 LOOP button
39 NON-STOP button
40 DISC 1 button
41 DISC 2 button
42 DISC 3 button
43 DISC 4 button
44 DISC 5 button
45 DECK A ⏏ EJECT button
46 DIRECTION button
47 DOLBY NR button
48 DECK A ■ (stop) button
49 DECK A ◀◀ (backward) button
50 DECK A ▶▶ (forward) button
51 DECK A ◁ (play) button
52 DECK A ▷ (play) button
53 PHONES jack
54 MIC1, MIC2 jack
55 MIC LEVEL, ECHO LEVEL knob
56 SLEEP button
57 DAILY 1 button
58 DAILY 2 button
59 🕘 / CLOCK SET button
60 REC button
61 WAVE button
62 SURROUND button
63 P FILE MEMORY button
64 GEQ CONTROL button
65 ENTER button
66 KEY CONTROL (♯) button
67 KEY CONTROL (♭) button
68 KARAOKE PON/MPX button
69 PLAY MODE button
70 REPEAT button
71 EDIT button
72 1/ALL DISCS button

– BACK PANEL –

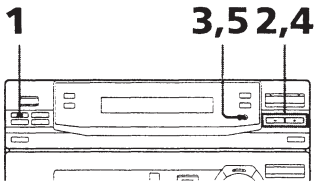


101 ANTENNA terminal
102 VOLTAGE SELECTOR switch (E, AR model)
103 SPEAKER terminal
104 SURROUND SPEAKER terminal (XB33K model)
105 VIDEO/MD (AUDIO) jack
106 PHONO jack
107 CD DIGITAL OUT connector

Step 2: Setting the time

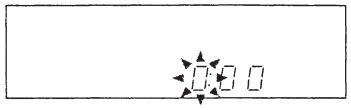
You must set the time before using the timer functions. The clock is on a 24- hour system for the European and Brazilian models, and a 12-hour system for other models.

The 24-hour system model is used for illustration purpose.



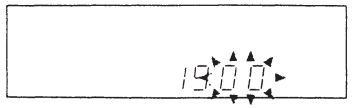
LBT-D390/D790/G5500/XB33/XB33K/XB44/XB44K/XB50/XB60 only

1 Press ⏲/CLOCK SET.
The hour indication flashes.

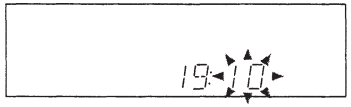


2 Press TUNING +/– to set the hour.

3 Press ENTER/NEXT.
The minutes indication flashes.



4 Press TUNING +/– to set the minutes.



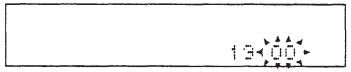
5 Press ENTER/NEXT.
The clock starts.

LBT-XB66/XB66K/XB660 only

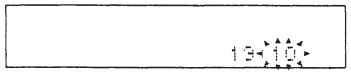
1 Press ⏲/CLOCK SET.
The hour indication flashes.

2 Press TUNING +/– to set the hour.

3 Press ENTER/NEXT.
The minutes indication flashes.



4 Press TUNING +/– to set the minutes.



5 Press ENTER/NEXT.
The clock starts.

Tip

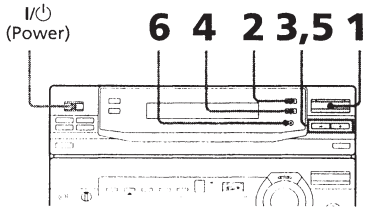
If you make a mistake, start over from step 1.

Step 3: Presetting radio stations

You can preset the following number of stations:

— 2 band model: 20 for FM and 10 for AM
— 3 band model: 20 for FM, 10 for MW, and 10 for LW
— 4 band model: 20 for FM, 10 for MW, 10 for LW, and 5 for UKV

The bands you can select depend on the kind of tuner built into your system. Confirm the bands by pressing TUNER/BAND repeatedly.



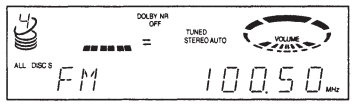
1 Press TUNER/BAND repeatedly until the band you want appears in the display.
Each time you press this button, the band changes as follows:
2 band model:
FM ⟷ AM
3 band model:
FM → MW → LW
4 band model:
FM → MW → LW → UKV*

* When you select this band, "STEREO Plus" appears in the display.

2 Press TUNING MODE repeatedly until "AUTO" appears in the display.

3 Press TUNING +/–.
The frequency indication changes and scanning stops when the system tunes in a station. "TUNED" and "STEREO" (for a stereo program) appear.

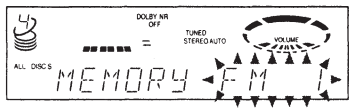
LBT-D390/D790/G5500/XB33/XB33K/XB44/XB44K/XB50/XB60



LBT-XB66/XB66K/XB660

4 Press TUNER MEMORY.
A preset number flashes in the display.

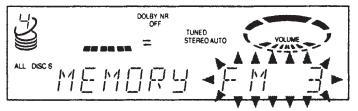
LBT-D390/D790/G5500/XB33/XB33K/XB44/XB44K/XB50/XB60



LBT-XB66/XB66K/XB660

5 Press TUNING +/– to select the preset number you want.

LBT-D390/D790/G5500/XB33/XB33K/XB44/XB44K/XB50/XB60



LBT-XB66/XB66K/XB660

6 Press ENTER/NEXT.
The station is stored.

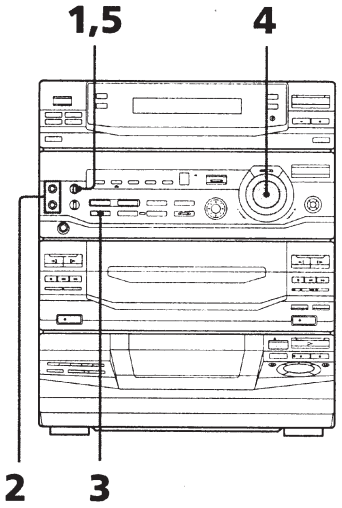
7 Repeat steps 1 through 6 to store other stations.

continued

This section is extracted from instruction manual.

Singing along: Karaoke

You can sing along with any stereo CD or tape by turning down the singer's voice. You need to connect an optional microphone.



1 Turn MIC LEVEL to MIN to turn down the microphone level.

2 Connect an optional microphone to the MIC (MIC 1*) jack.

When you use two microphones at the same time, connect the other one to the MIC 2* jack.

(* LBT-XB33K/XB44K/XB66K only)

3 Press KARAOKE PON/MPX repeatedly to obtain the desired karaoke effect.

Each time you press this button, the display changes as follows:

KARAOKE PON → MPX R → MPX L
↑ EFFECT OFF (ON) ←

"🎤" appears in the display when the karaoke mode is activated.

To	Select
Reduce the singer's voice on a CD or tape	KARAOKE PON
Reduce the left channel on a multiplex CD or tape	MPX R
Reduce the right channel on a multiplex CD or tape	MPX L

4 Start playing the music and adjust the volume.

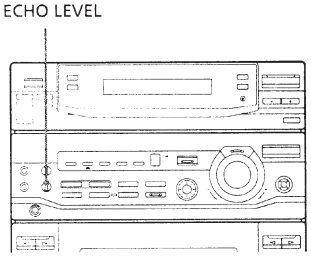
5 Turn MIC LEVEL to adjust the microphone volume.

When you are done

Turn MIC LEVEL to MIN and disconnect the microphone from MIC, then press KARAOKE PON/MPX repeatedly until "🎤" disappears from the display.

Adjusting the microphone echo

(LBT-XB33K/XB44K/XB66K only)



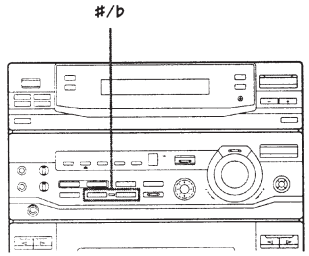
➡ Turn ECHO LEVEL to adjust the echo effect.

To cancel the echoing

Turn ECHO LEVEL to MIN.

Adjusting the key

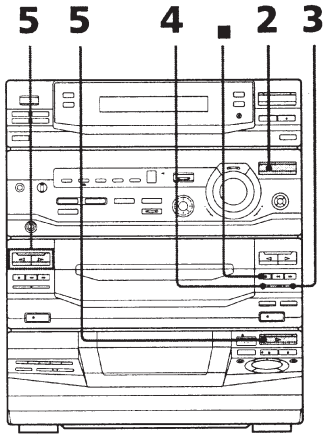
(LBT-XB33K/XB44K/XB66K only)



➡ Press ♭ or ♯.

You can adjust the key higher or lower in 13 halftone steps (–3.0 to 3.0).

Mixing and recording sounds



1 Prepare the microphone and the karaoke effect. Then, insert a blank tape in deck B.

2 Press FUNCTION repeatedly to select the source you desire and set it to pause mode.

3 Press ● REC.

4 Press ❚❚.

5 Press ▷ to start playing the CD (or tape in deck A).

Playback starts.

Start singing along with the music.

To stop recording

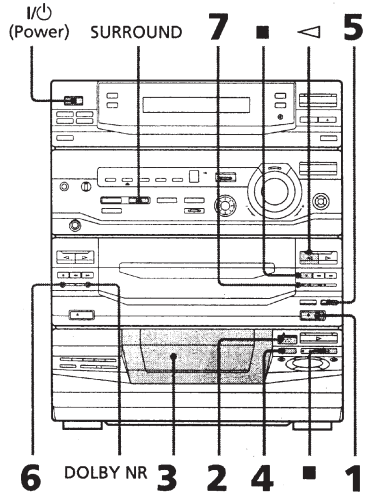
Press ■ on deck B.

continued

Recording a CD

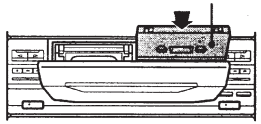
— CD Synchro Recording

This function lets you record from a CD to a tape easily. You can use TYPE I (normal) or TYPE II (CrO_2) tapes. The recording level is adjusted automatically.



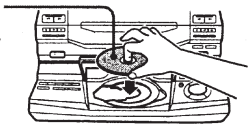
1 Press ⏏ EJECT and insert a blank tape into deck B.

With the side you want to record on facing forward



2 Press ⏏ OPEN and place a CD.

With the label side up. When you play a CD single, place it on the inner circle of the tray.



3 Close the front cover.

4 Press DISC SKIP repeatedly until the disc number you want to record appears in the playing position indicator.

5 Press CD SYNC.
Deck B stands by for recording and the CD player stands by for playback, and the indicator on the ▻ button (for the front side) lights up green.

6 Press DIRECTION repeatedly to select ⇄ to record on one side or ⇆ (or RELAY) to record on both sides.

7 Press ❚❚ on deck B.
Recording starts.

To stop recording

Press ■ on deck B or on the CD player.

Tips

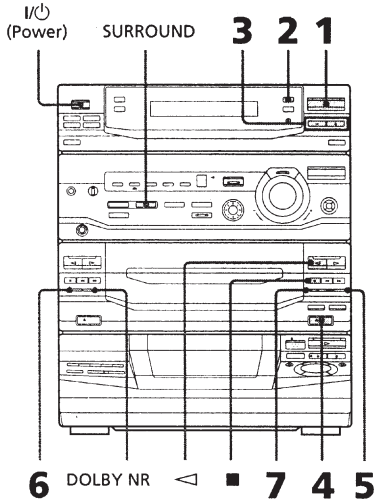
- If you want to record on the reverse side, press ◁ so the indicator on the ◁ button (for the reverse side) lights up green.
- When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR before step 7 so "DOLBY NR B" appears in the display.
- To record with the surround effect, press SURROUND so "SUR ((( ))) " appears in the display.
  The equalizer settings will not be recorded.

Note

You cannot listen to other sources while recording.

Recording from the radio

You can record a radio program on a tape by tuning in a preset station. You can use TYPE I (normal) or TYPE II (CrO_2) tapes. The recording level is automatically adjusted.



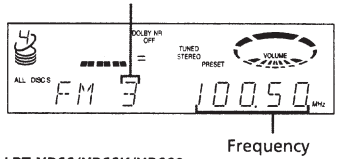
1 Press TUNER/BAND repeatedly until the band you want appears in the display.

2 Press TUNING MODE repeatedly until "PRESET" appears in the display.

3 Press TUNING +/– to tune in a preset station.

LBT-D390/D790/G5500/XB33/XB33K/XB44/XB44K/XB50/XB60

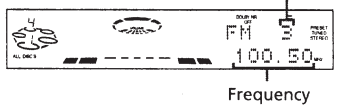
Preset number



Frequency

LBT-XB66/XB66K/XB660

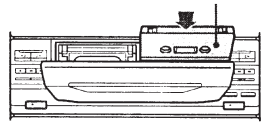
Preset number



Frequency

4 Press ⏏ EJECT and insert a blank tape into deck B.

With the side you want to record on facing forward



5 Press ● REC.
Deck B stands by for recording, and the indicator on the ▻ button (for the front side) lights up green.

6 Press DIRECTION repeatedly to select ⇄ to record on one side or ⇆ (or RELAY) to record on both sides.

7 Press ❚❚ on deck B.
Recording starts.

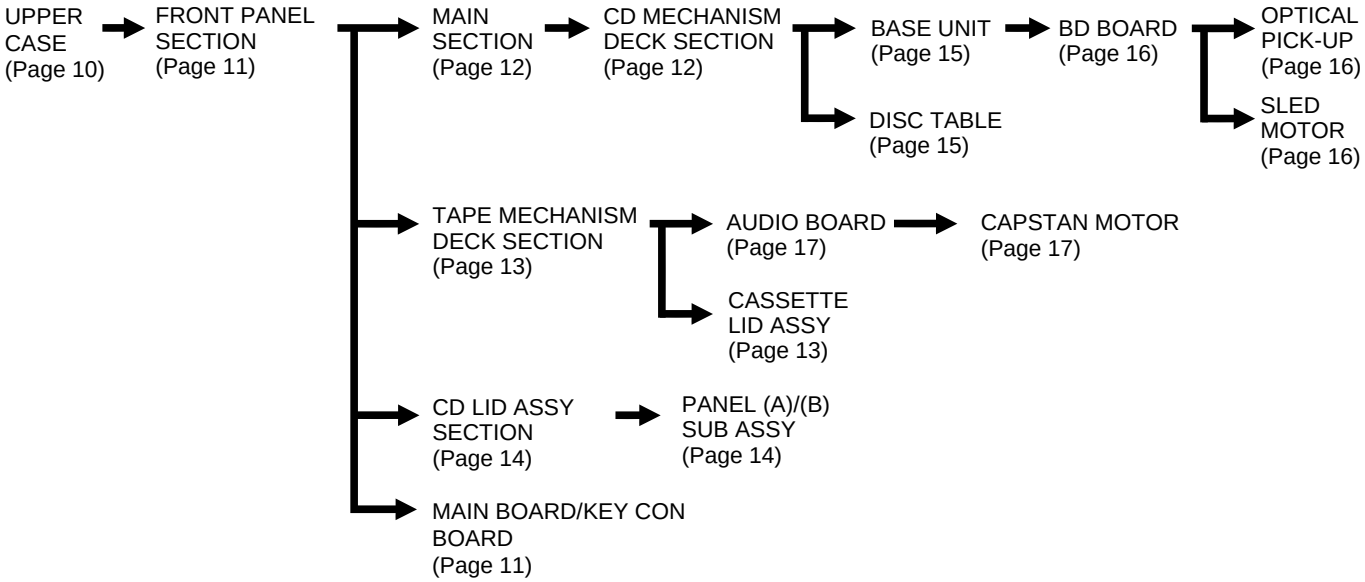
To stop recording

Press ■ on deck B.

continued

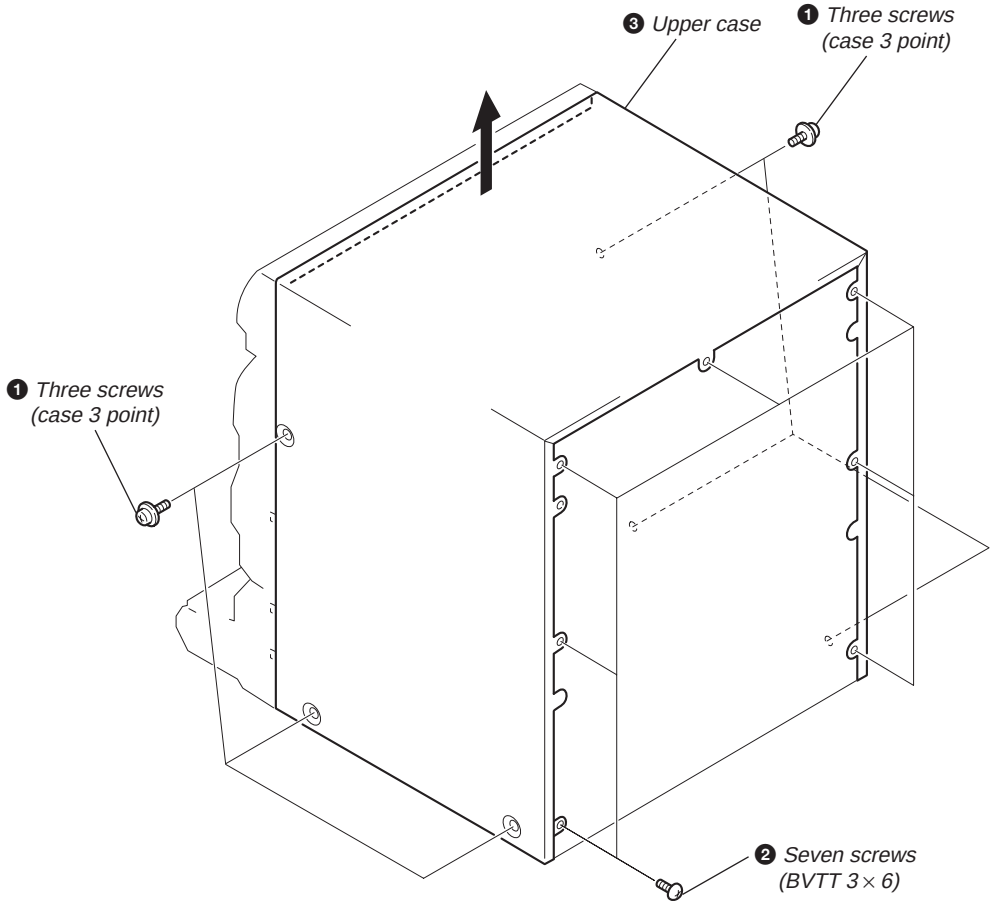
SECTION 2
DISASSEMBLY

• This set can be disassembled in the order shown below.

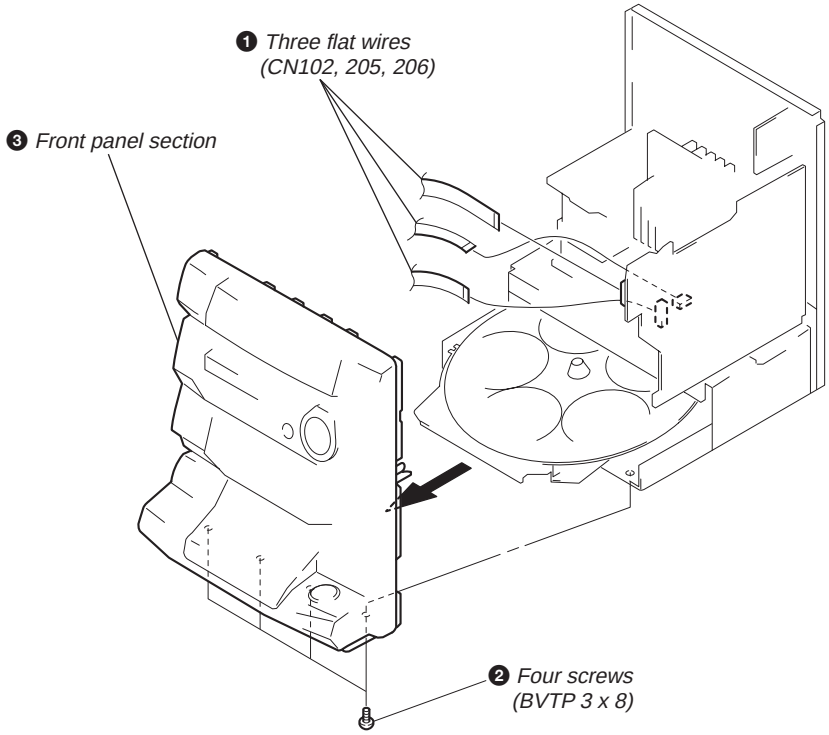

UPPER CASE (Page 10)
FRONT PANEL SECTION (Page 11)
MAIN SECTION (Page 12)
CD MECHANISM DECK SECTION (Page 12)
BASE UNIT (Page 15)
BD BOARD (Page 16)
OPTICAL PICK-UP (Page 16)
DISC TABLE (Page 15)
SLED MOTOR (Page 16)
TAPE MECHANISM DECK SECTION (Page 13)
AUDIO BOARD (Page 17)
CAPSTAN MOTOR (Page 17)
CASSETTE LID ASSY (Page 13)
CD LID ASSY SECTION (Page 14)
PANEL (A)/(B) SUB ASSY (Page 14)
MAIN BOARD/KEY CON BOARD (Page 11)

Note: Follow the disassembly procedure in the numerical order given.

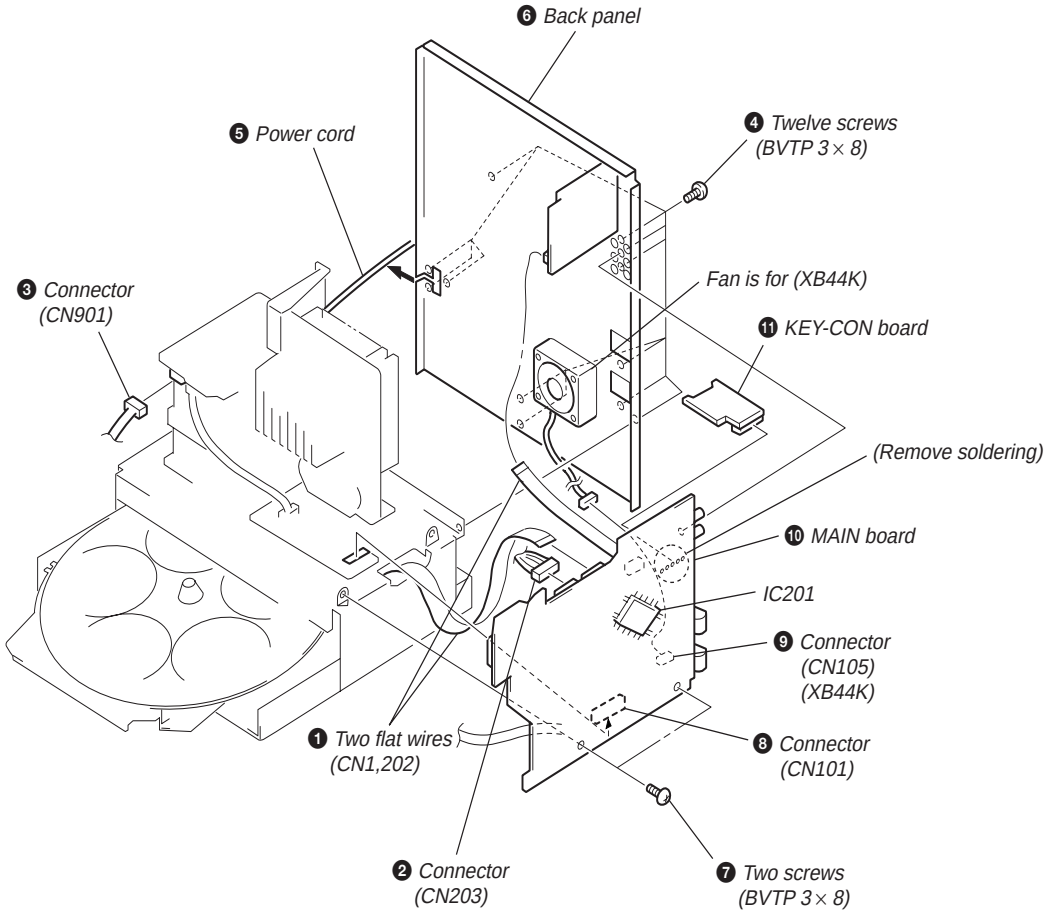
2-1. UPPER CASE



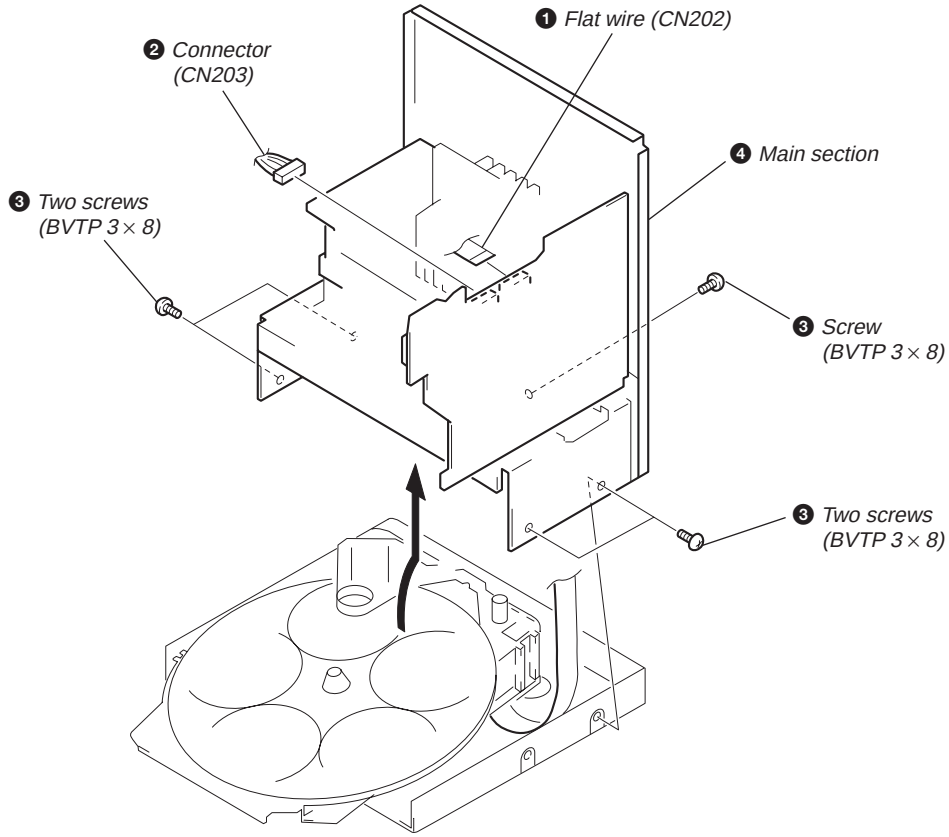
2-2. FRONT PANEL SECTION



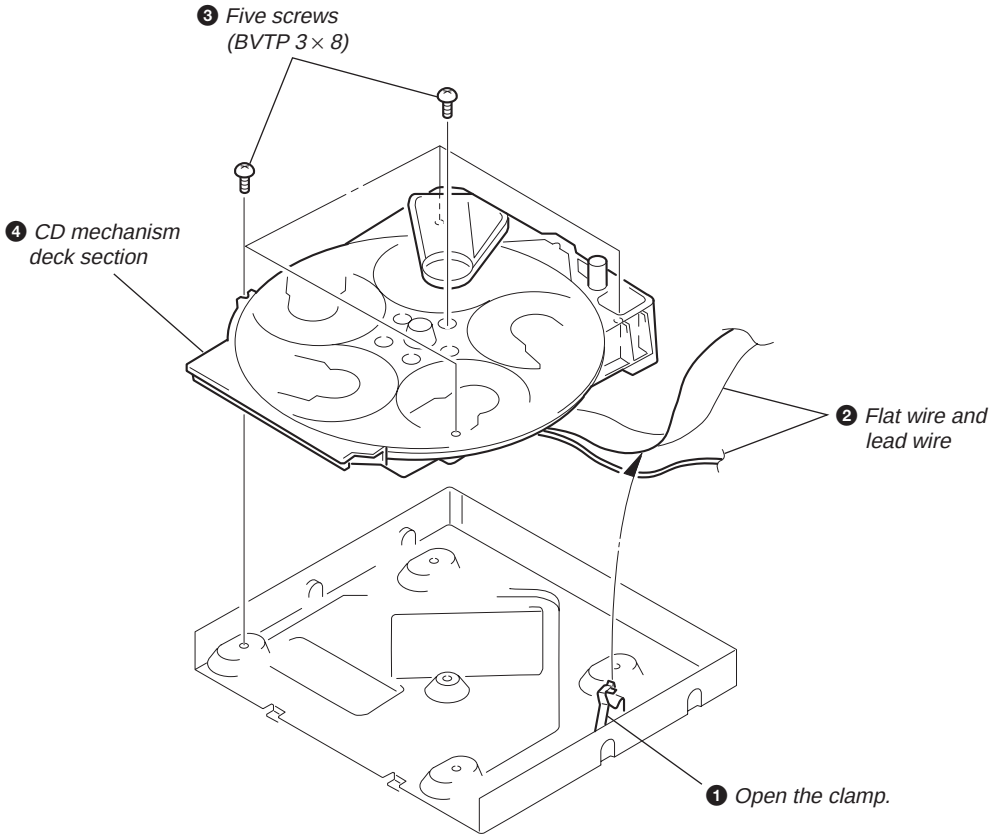
2-3. MAIN BOARD/KEY-CON BOARD



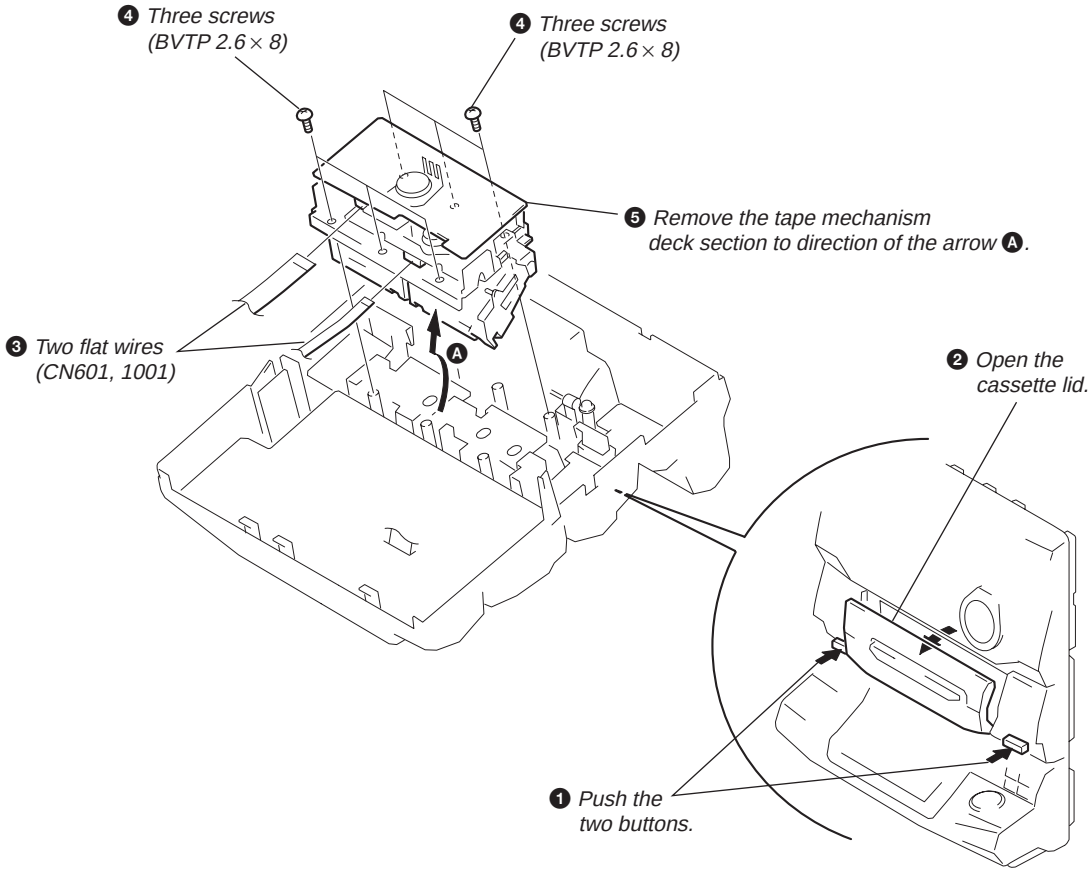
2-4. MAIN SECTION



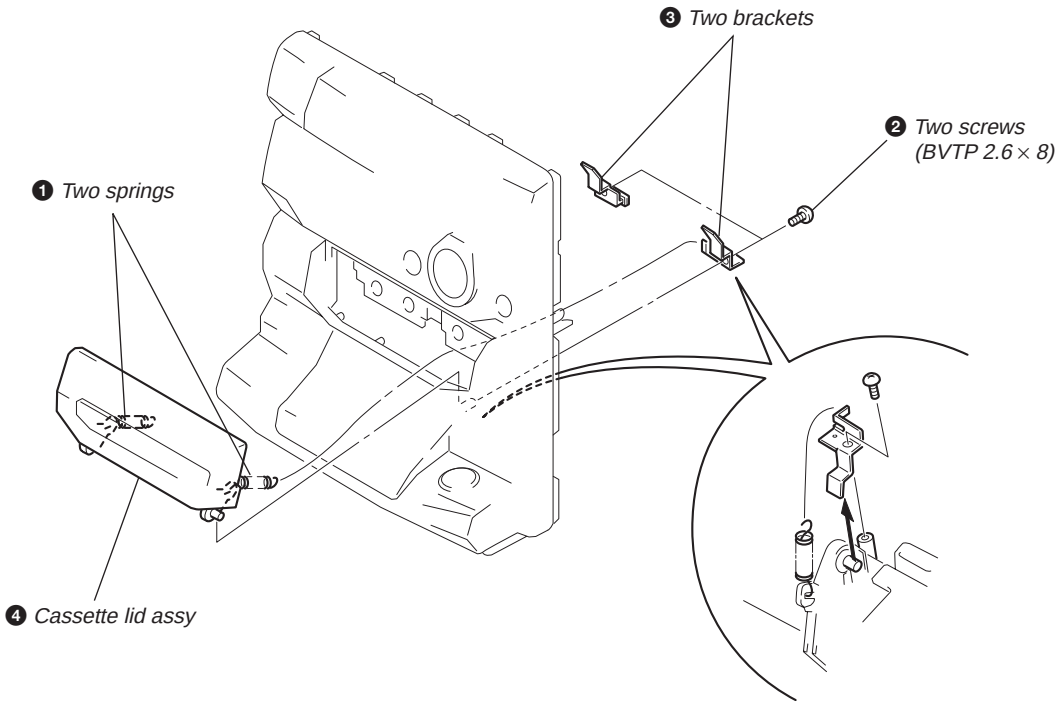
2-5. CD MECHANISM DECK SECTION



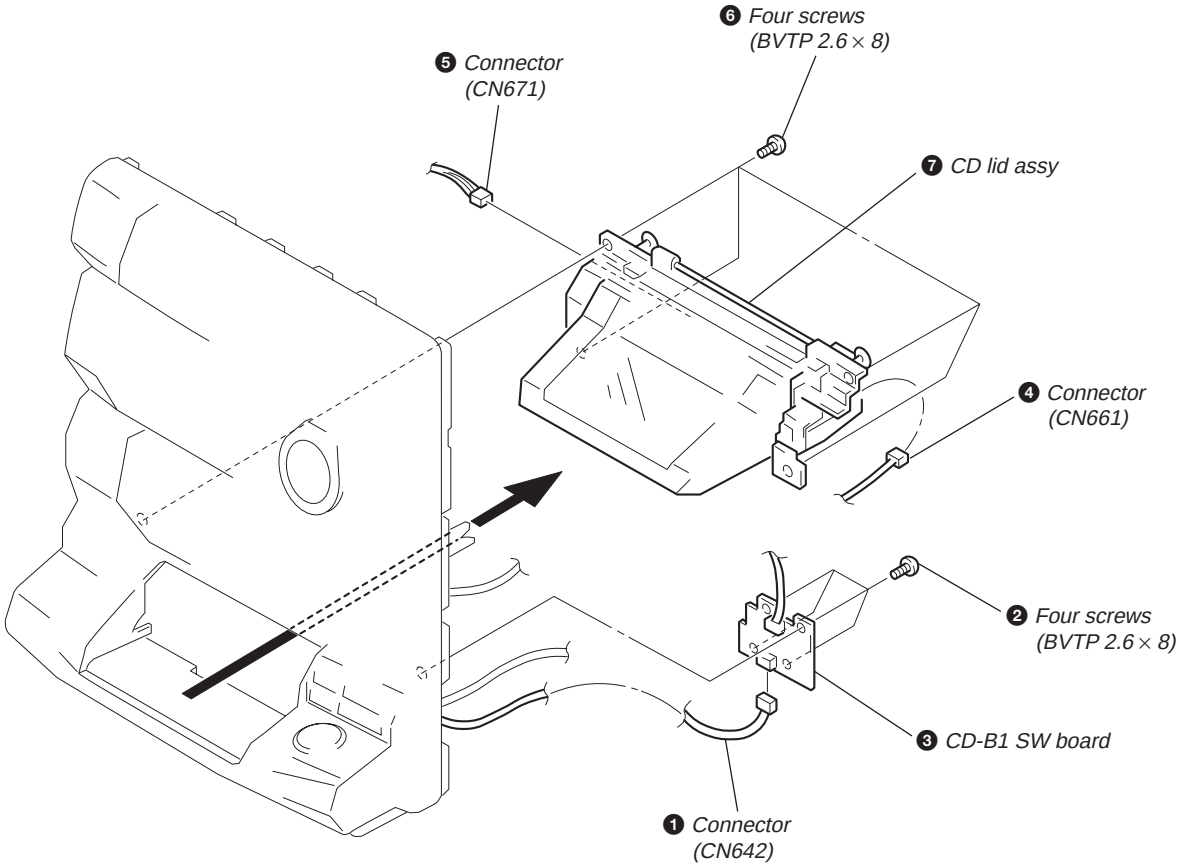
2-6. TAPE MECHANISM DECK SECTION


❹ Three screws (BVTP 2.6 × 8)
❹ Three screws (BVTP 2.6 × 8)
❺ Remove the tape mechanism deck section to direction of the arrow Ⓐ.
❸ Two flat wires (CN601, 1001)
Ⓐ
❷ Open the cassette lid.
❶ Push the two buttons.

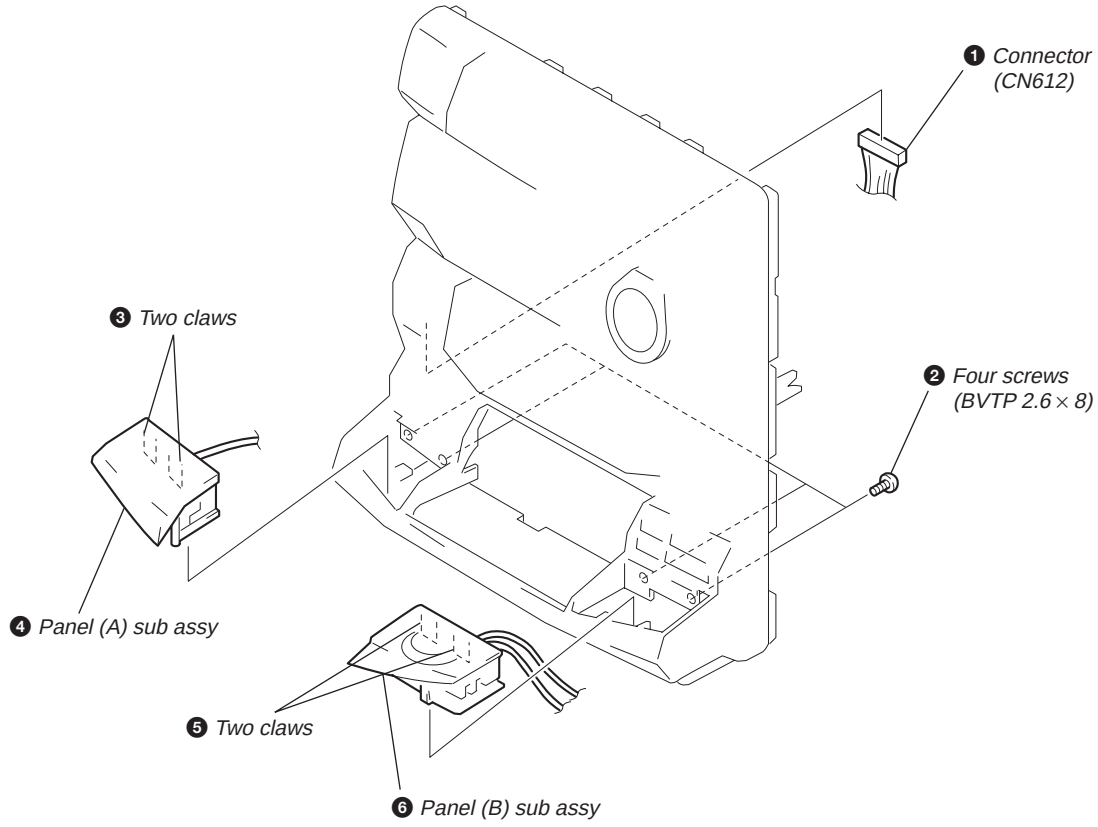
2-7. CASSETTE LID ASSY



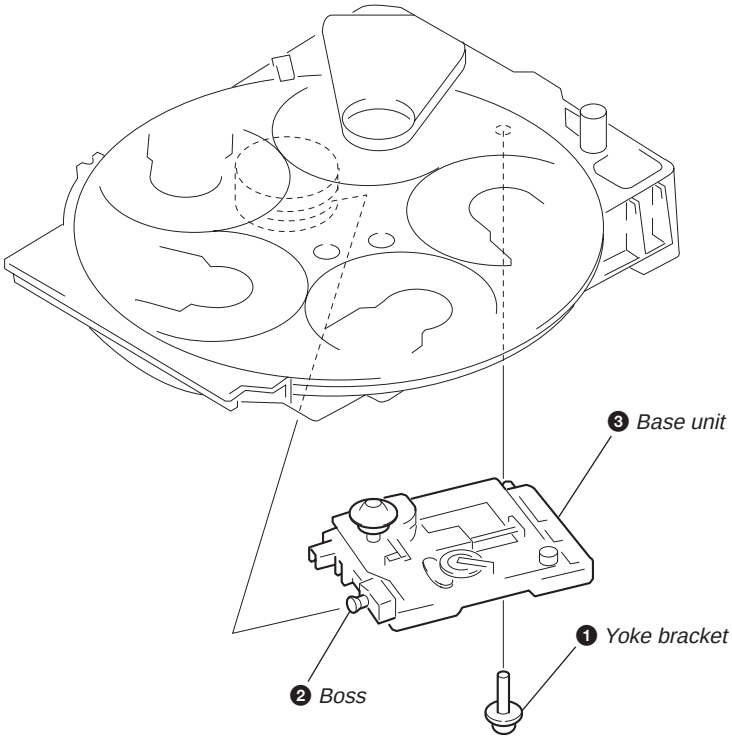
2-8. CD LID ASSY SECTION



2-9. PANEL (A) / (B) SUB ASSY

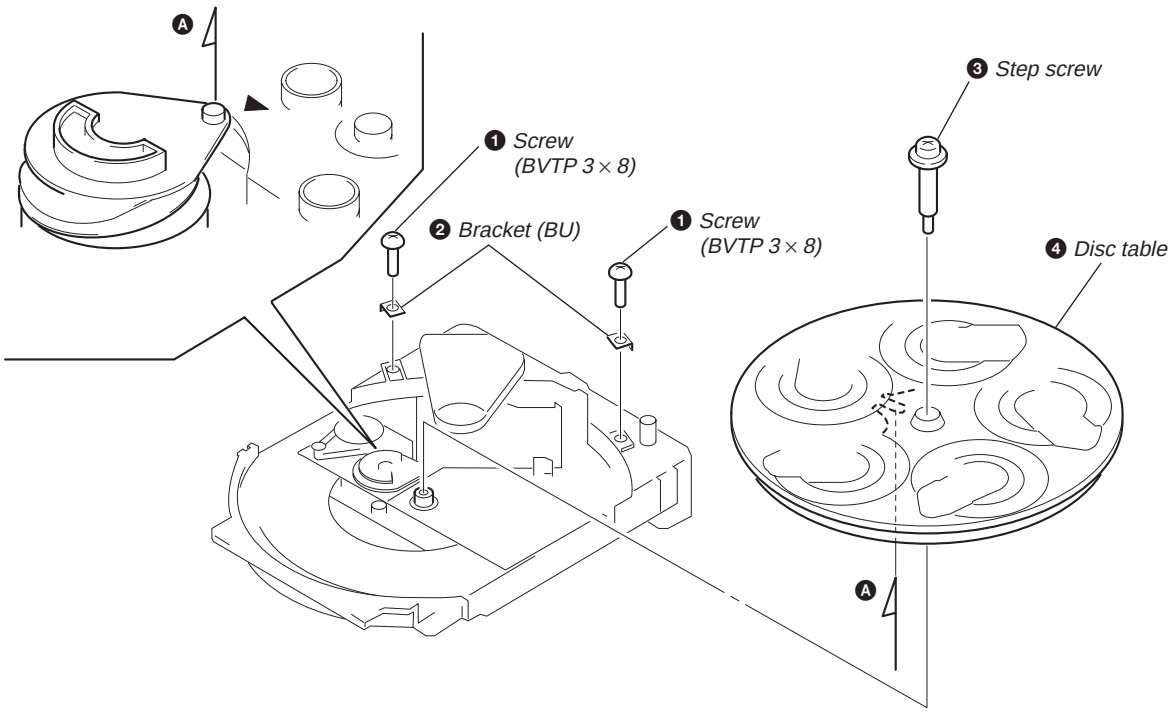


2-10. BASE UNIT

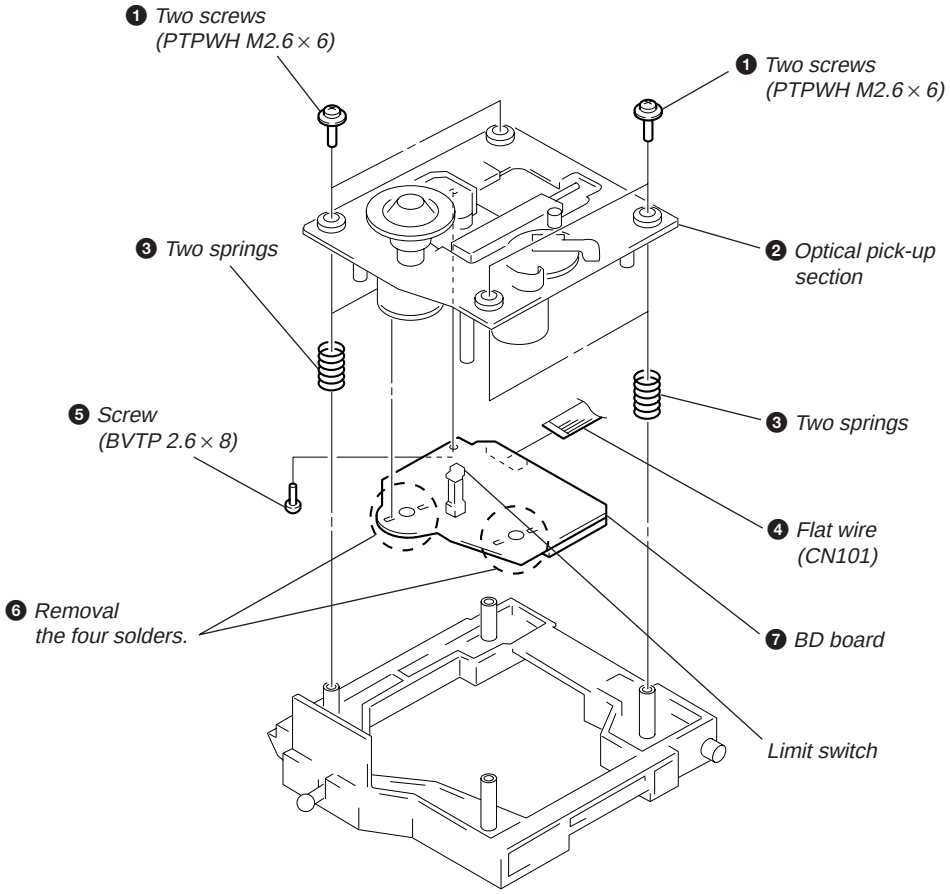


2-11. DISC TABLE

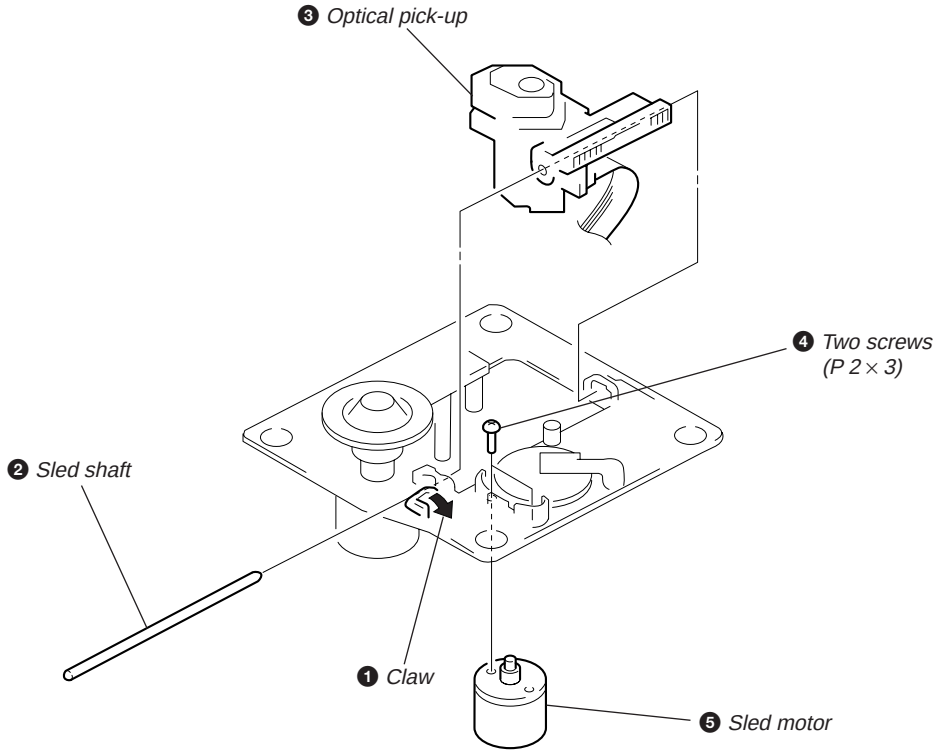
Note:
When the disc table is installed, adjust the positions of roller cam and mark ► as shown in the figure, then set to the groove of disc table.



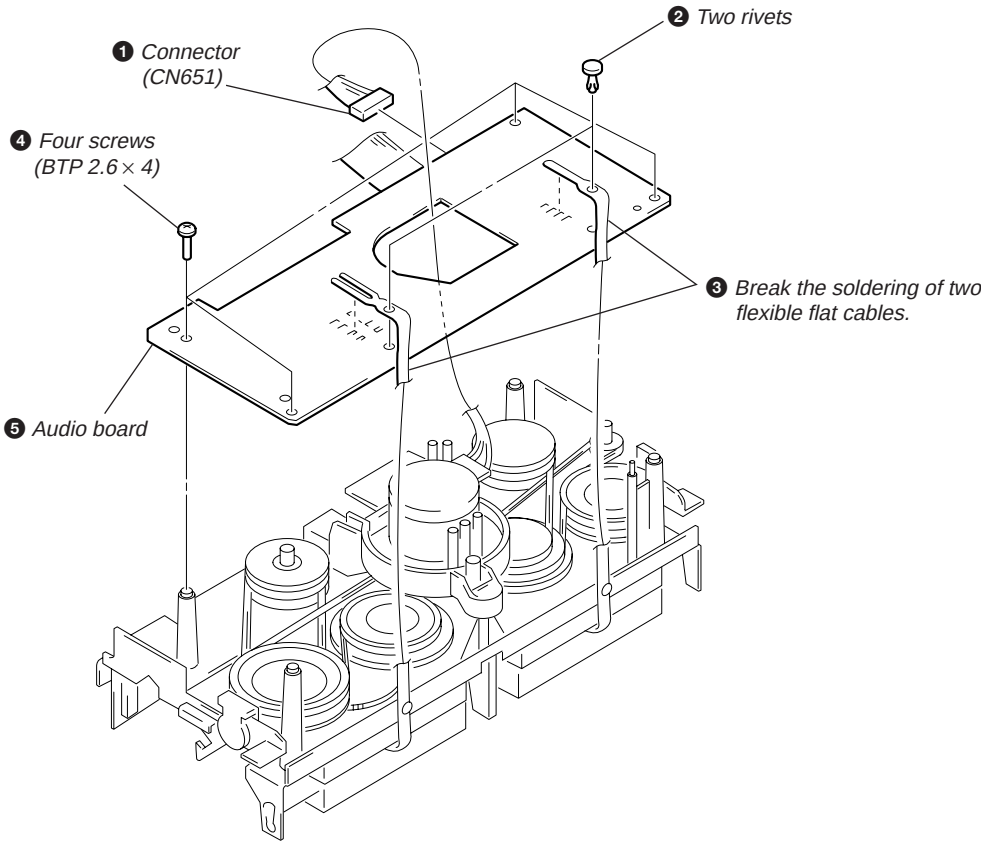
2-12. BD BOARD



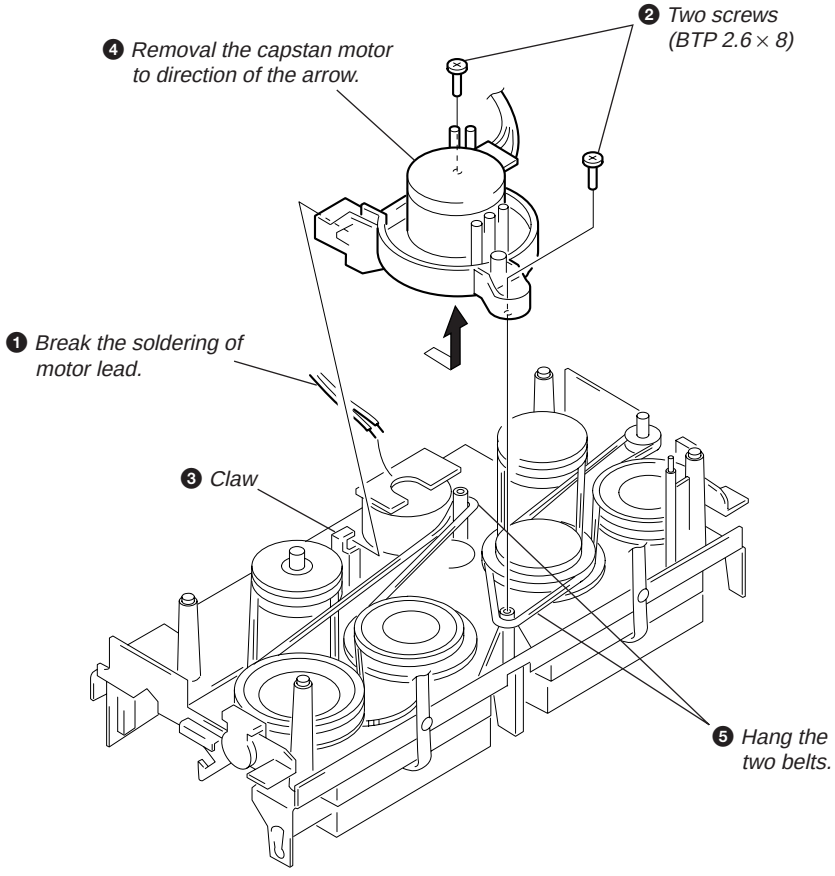
2-13. OPTICAL PICK-UP, SLED MOTOR



2-14. AUDIO BOARD



2-15. CAPSTAN MOTOR


❷ Two screws (BTP 2.6 × 8)
❹ Removal the capstan motor to direction of the arrow.
❶ Break the soldering of motor lead.
❸ Claw
❺ Hang the two belts.

SECTION 3
TEST MODE

[MC Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons [GROOVE], [ENTER/NEXT], and [DISC 1] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[CD Delivery Mode]

- This mode moves the pickup to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [POWER] button to turn the set ON.
2. Press [PLAY MODE] button and [POWER] button simultaneously.
3. A message "LOCK" is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

[MC Hot Reset]

- This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons [GROOVE], [ENTER/NEXT], and [DISC 2] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[Sled Servo Mode]

- This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pickup.

Procedure:

1. Select the function "CD".
2. Press three buttons [GROOVE], [ENTER/NEXT], and [FLASH] simultaneously.
3. The Sled Servo mode is selected, if "CD" is flashing on the fluorescent indicator tube.
4. With the CD in stop status, press [▶▶] button in CD section to move the pickup to outside track, or [◀◀] button to inside track.
5. To exit from this mode, perform as follows:
   1) Move the pickup to the most inside track.
   2) Press three buttons in the same manner as step 2.

Note:

- Always move the pickup to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[Change-over of AM Tuner Step between 9kHz and 10kHz]

- A step of AM channels can be changed over between 9kHz and 10kHz.

Procedure:

1. Press [POWER] button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "AM".
3. Press [POWER] button to turn the set OFF.
4. Press [ENTER/NEXT] and [POWER] buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9k STEP" or "AM 10k STEP", and thus the channel step is changed over.

[LED and Fluorescent Indicator Tube All Lit, Key Check Mode]

Procedure:

1. Press three buttons [GROOVE], [ENTER/NEXT], and [DISC 3] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on. Press [DISC 2] button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays "K 1 J0 V0". Each time a button is pressed, "K"value increases. However, once a button is pressed, it is no longer taken into account.
   "J" Value increases like 1, 2, 3 ... if rotating [⏮◁◁ AMS ▷▷⏭] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "–" direction.
   "V" Value increases like 1, 2, 3 ... if rotating [VOLUME] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "–" direction.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

- If an error occurred:
  The aging operation stops.
- If no error occurs:
  The aging operation continues repeatedly.

1. Aging Mode in CD Section

1-1. Operating Method of Aging Mode

1. Set discs in DISC 1 and DISC 3 trays.
2. Select the function "CD".
3. Press three buttons [GROOVE], [ENTER/NEXT], and [DISC 5] simultaneously.
4. The aging mode is activated, if a roulette mark on the fluorescent indicator tube is flashing.
5. In the aging mode, the aging is executed in a sequence given in "1-2. Operation during Aging Mode".
   The aging continues unless an alarm occurred.
6. To exit from the aging mode, press [POWER] button to turn the set OFF.

- If a button other than buttons in the CD section is pressed during aging, the aging in the CD section is finished.
- To execute aging to the tape deck section successively, press [▷] button in the deck A.
  "AGING" is displayed on the fluorescent indicator tube. (For the aging in tape deck, see "2. Aging Mode in Tape Deck Section".

1-2. Operation during aging Mode

In the aging mode, the program is executed in the following sequence.

1. The disc tray turns to select a disc. (For a disc selection sequence, see Section 1-3.)
2. TOC of disc is read.
3. The pickup accesses to the last track.
4. Steps 1 through 3 are repeated.

1-3. Disc Selection Sequence

- During the aging mode, discs are selected in the following sequence:

Disc 1 → Disc 3
↑ ↓
Disc 3 ← Disc 1

2. Aging Mode in Tape Deck Section

2-1. Operating Method of Aging Mode

1. Load a commercially available 10-minute tape into the decks A and B respectively.
   (If a 10-minute tape is not available, another tape may be used but a cycle time will be longer.)
2. Select the function "TAPE".
3. Rewind tapes in advance by pressing [◀◀] button respectively on decks A and B.
4. Press three buttons [GROOVE], [ENTER/NEXT], and [DISC 5] simultaneously.
5. Press [▷] button on deck A. (This button triggers the aging mode.)
6. The aging mode is activated if "AGING A" is displayed on the fluorescent indicator tube.
7. In the aging mode, the aging is executed in a sequence given in "2-2. Operation during Aging Mode".
   The aging continues unless an alarm occurred.
8. To exit from the aging mode, press POWER button to turn the set OFF.

2-2. Operation during Aging Mode

In the aging mode, the program is executed in the following sequence.

1. A tape on FWD side is played for one minute.
2. PAUSE STOP is made.
3. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed.)
4. FF is executed up to the end of tape.
5. A tape is reversed, and the tape on REV side is played for one minute.
6. PAUSE STOP is made.
7. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed.)
8. FF is executed up to the end of tape.
9. Steps 1 through 8 are executed for the other deck.
10. Steps 1 through 9 are repeated unless an alarm occurred.

2-3. Deck Selection Sequence

- During the aging mode, decks are selected in the following sequence:

Deck A (FWD) → Deck A (REV)
↑ ↓
Deck B (REV) ← Deck B (FWD)

SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
   - record/playback head
   - erase head
   - capstan
   - pinch roller
   - rubber belts
   - idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	36 to 61g·cm (0.50 – 0.84 oz·inch)
Forward Back Tension	CQ-102C	2 to 6g·cm (0.026 – 0.082 oz·inch)
Reverse	CQ-102RC	36 to 61g·cm (0.50 – 0.84 oz·inch)
Reverse Back Tension	CQ-102RC	2 to 6g·cm (0.026 – 0.082 oz·inch)
FF, REW	CQ-201B	61 to 143g·cm (0.85 – 1.98 oz·inch)

• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 100g (3.52 oz)
Reverse	CQ-403R	more than 100g (3.52 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

DECK SECTION 0dB=0.775V

1. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.
8. Set to test mode. (Press key switch same time GROOVE ENTER/NEXT and DISC 4 button.)

• Test Tape

Tape	Signal	Used for
P-4-A100	10kHz, –10 dB	Azimuth Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment

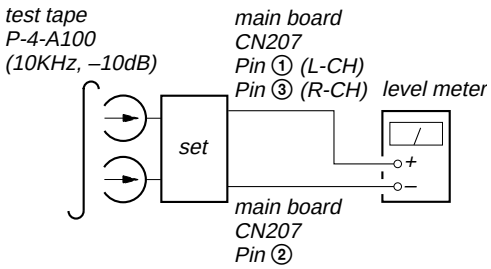
Record/Playback Head Azimuth Adjustment

DECK A **DECK B**

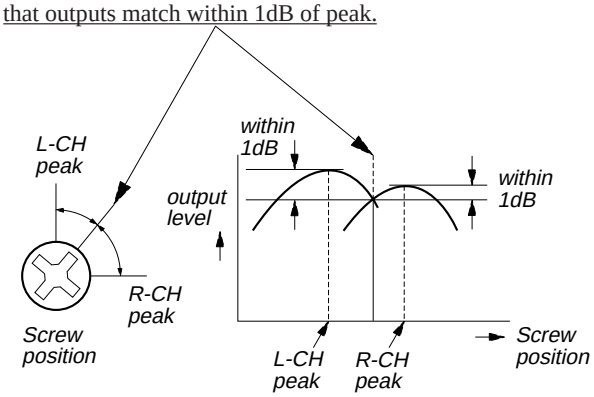
Note: Perform this adjustments for both decks

Procedure:

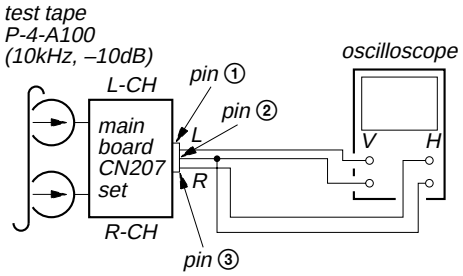
1. Mode: Playback (FWD)

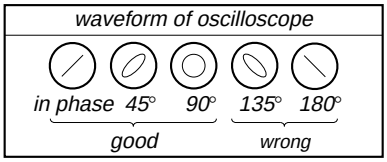


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.



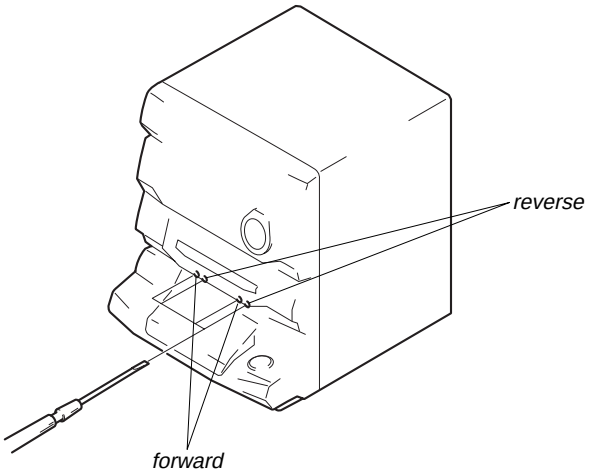
3. Mode: Playback (FWD)





4. Repeat steps 1 to 3 in playback (REV) mode.
5. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Record/Playback Head (Deck A and B) and main board.



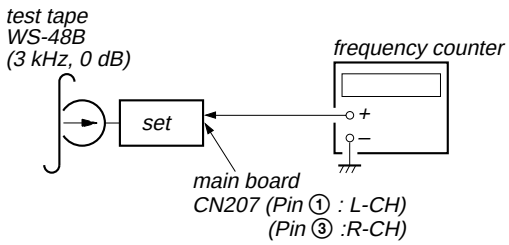
Tape Speed Adjustment DECK A

Notes: • Start the Tape Speed adjustment as below after setting to the test mode.
• In the test mode, the tape speed is high during pressing the H. SPEED DUB button.

Procedure:

1. Turn the power switch on.
2. Press the GROOVE button, ENTER/NEXT button and DISC 4 button simultaneously.
   To exit from the test mode, press the POWER button.

Mode: Playback (FWD)



1. Insert the WS-48B into the deck A and the blank tape into the deck B.
2. Press the REC button and ▷ button on the deck B. Then the deck B is at recording mode.
3. Set the deck A to playback mode.
4. Keep pressing the H. SPEED DUB button in playback mode. Then at HIGH speed mode.
5. Adjust RV652 on the AUDIO board do that frequency counter reads 6,000 ± 180 Hz.
6. Take off the H. SPEED DUB button. Then at NORMAL speed mode.
7. Adjust RV651 on the AUDIO board so that frequency counter reads 3,000 ± 90 Hz.
8. Frequency difference between deck A and deck B the beginning of the tape should be within ± 1.5%.

Adjustment Location: AUDIO board

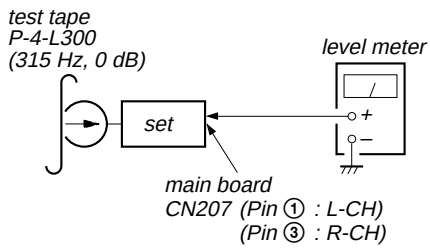
Sample Value of Wow and flutter

W.RMS (JIS) within 0.3%
(test tape: WS-48B)

Playback level Adjustment DECK A DECK B

Procedure:

Mode: Playback (FWD)



Deck A is RV311 (L-CH) and RV411 (R-CH), Deck B is RV301 (L-CH) and RV401 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level:

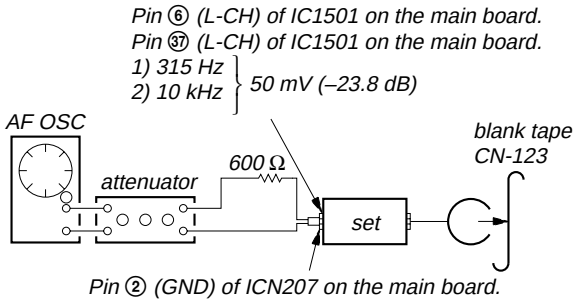
CN207 PB level: 301.5 to 338.3 mV (–8.2 to –7.2 dB) level difference between the channels: within ±0.5 dB

Adjustment Location: AUDIO and main boards

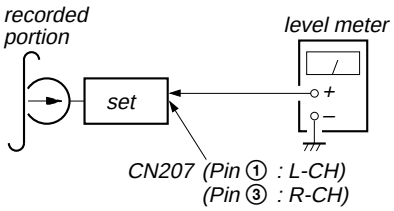
Record Bias Current Adjustment DECK B

Procedure:

1. Mode: record



2. Mode: Playback



Confirm playback that the signal recorded in step 1 becomes adjustable limits as follows.
If these levels are not adjustable limits, adjust the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 1 and 2.

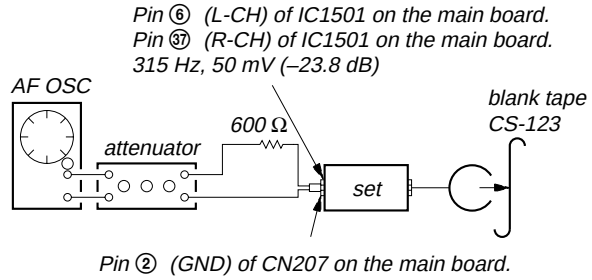
Adjustable limits: Playback output of 315 Hz to playback output of 10kHz: 0±0.5 dB

Adjustment Location: AUDIO and main boards

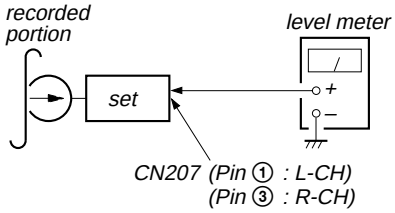
Record Level Adjustment DECK B

Procedure:

1. Mode: record


Pin ⑥ (L-CH) of IC1501 on the main board.
Pin ㊲ (R-CH) of IC1501 on the main board.
315 Hz, 50 mV (–23.8 dB)
AF OSC
attenuator
600 Ω
set
blank tape
CS-123
Pin ② (GND) of CN207 on the main board.

2. Mode: Playback

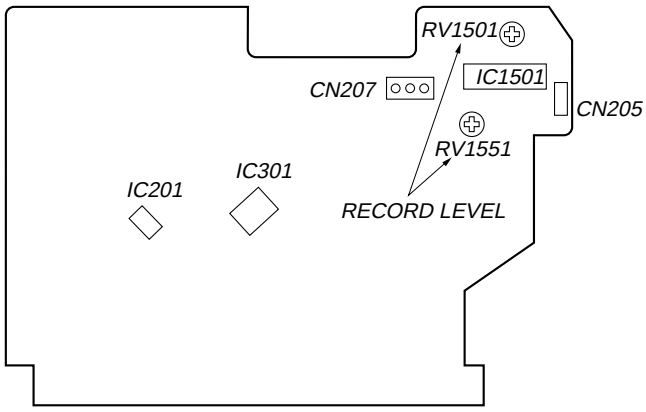


Confirm playback that the signal recorded in step 1 becomes adjustable limits as follows.
If these levels are not adjustable limits, adjust the RV1501 (L-CH) and RV1551 (R-CH) on the main board to repeat steps 1 and 2.

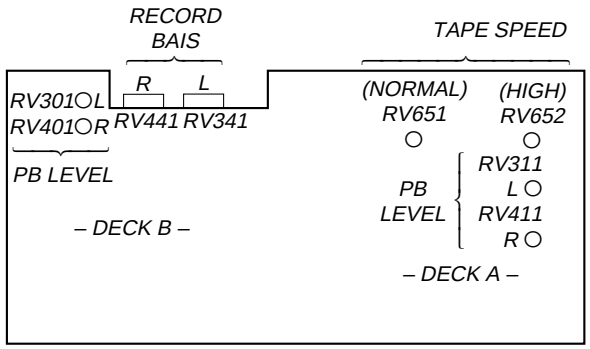
Adjustable limits:
CN207 PB level: 47.3 to 53.1 mV (–24.3 to –23.3 dB)

Adjustment Location: main board

[MAIN BOARD] (Component Side)



[AUDIO BOARD] (Conductor Side)

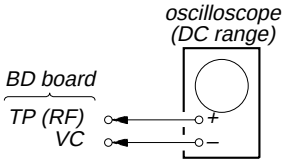


CD SECTION

Note:

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

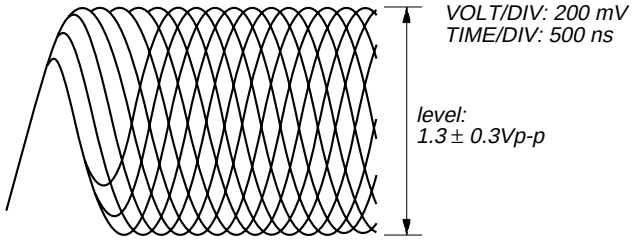
Focus Bias check



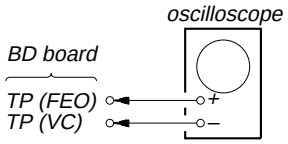
Procedure:

1. Connect oscilloscope to test point TP (RF). (GND terminal : VC)
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that the shape "◇" can be clearly distinguished at the center of the waveform and check the RF signal level.

- **RF signal**



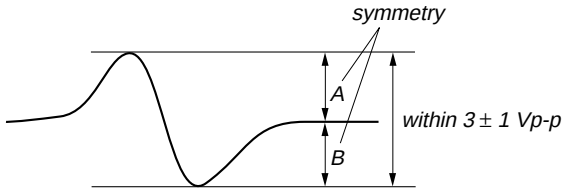
S Curve Check



Procedure:

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and GND by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1 Vp-p.

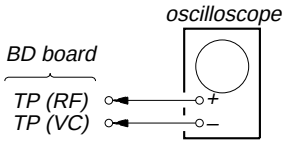
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Notes:
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

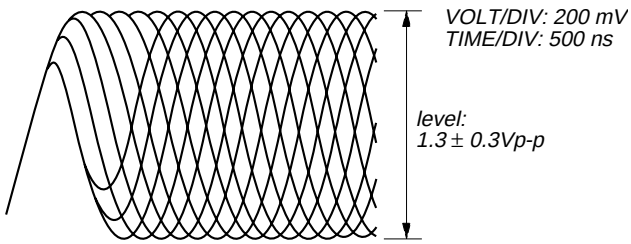


Procedure:

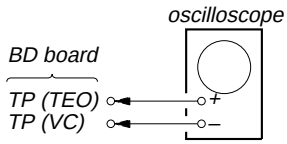
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

- **RF signal**



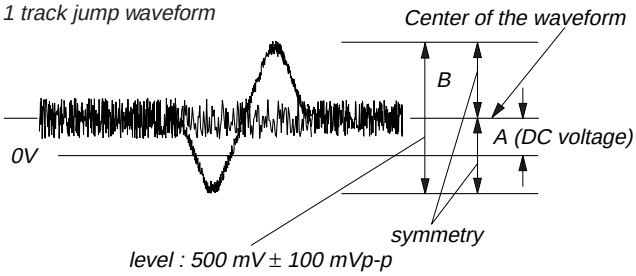
E-F Balance (1 Track Jump) check
(Without remote commander)



Procedure:

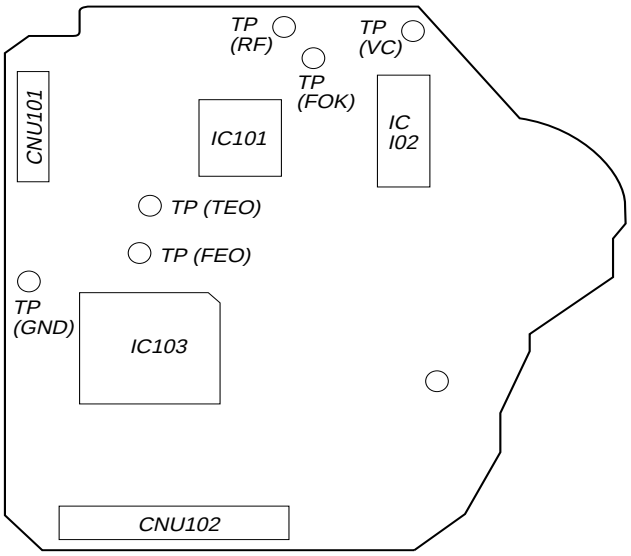
1. Connect oscilloscope to test point TP (TEO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the "▮▮ (Pause)" button. (Becomes the 1 track jump mode)
5. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following:

$$\frac{A - B}{2\,(A + B)} \times 100 = \pm 7\ (\%)$$



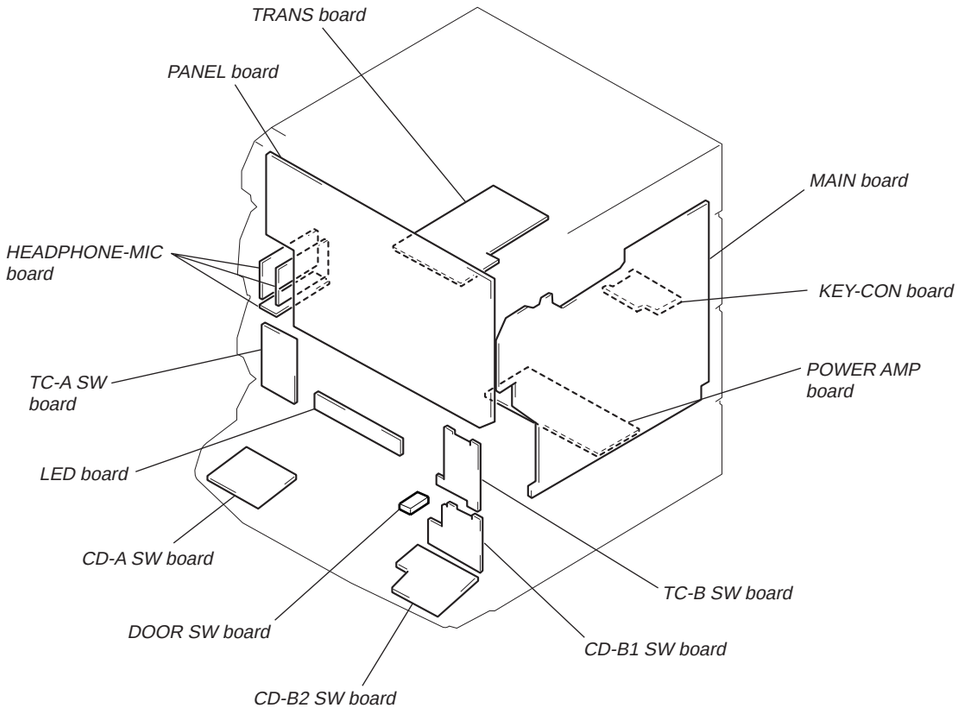
Adjustment Location:

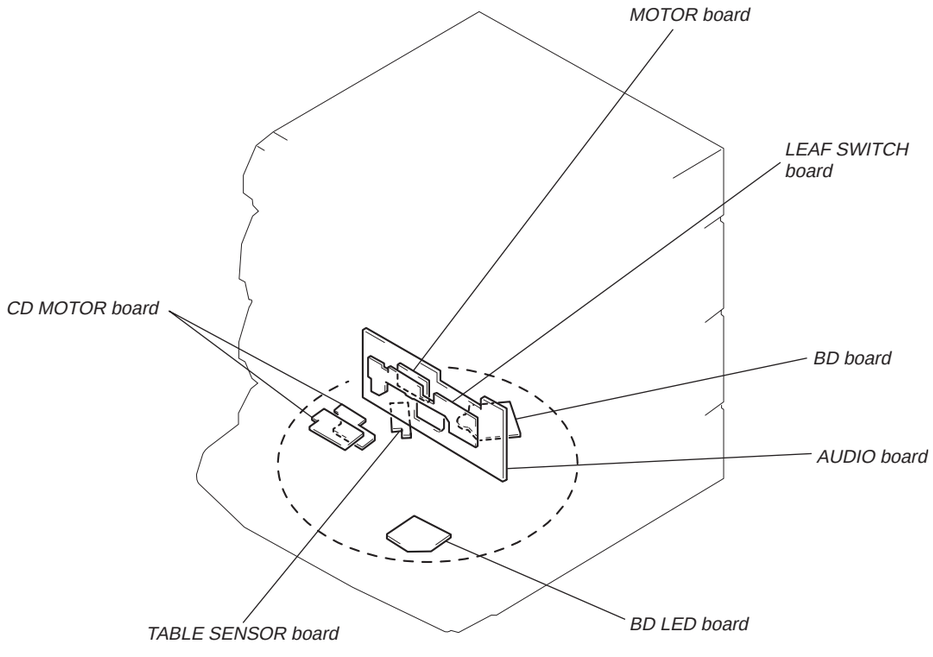
[BD BOARD] (Conductor Side)



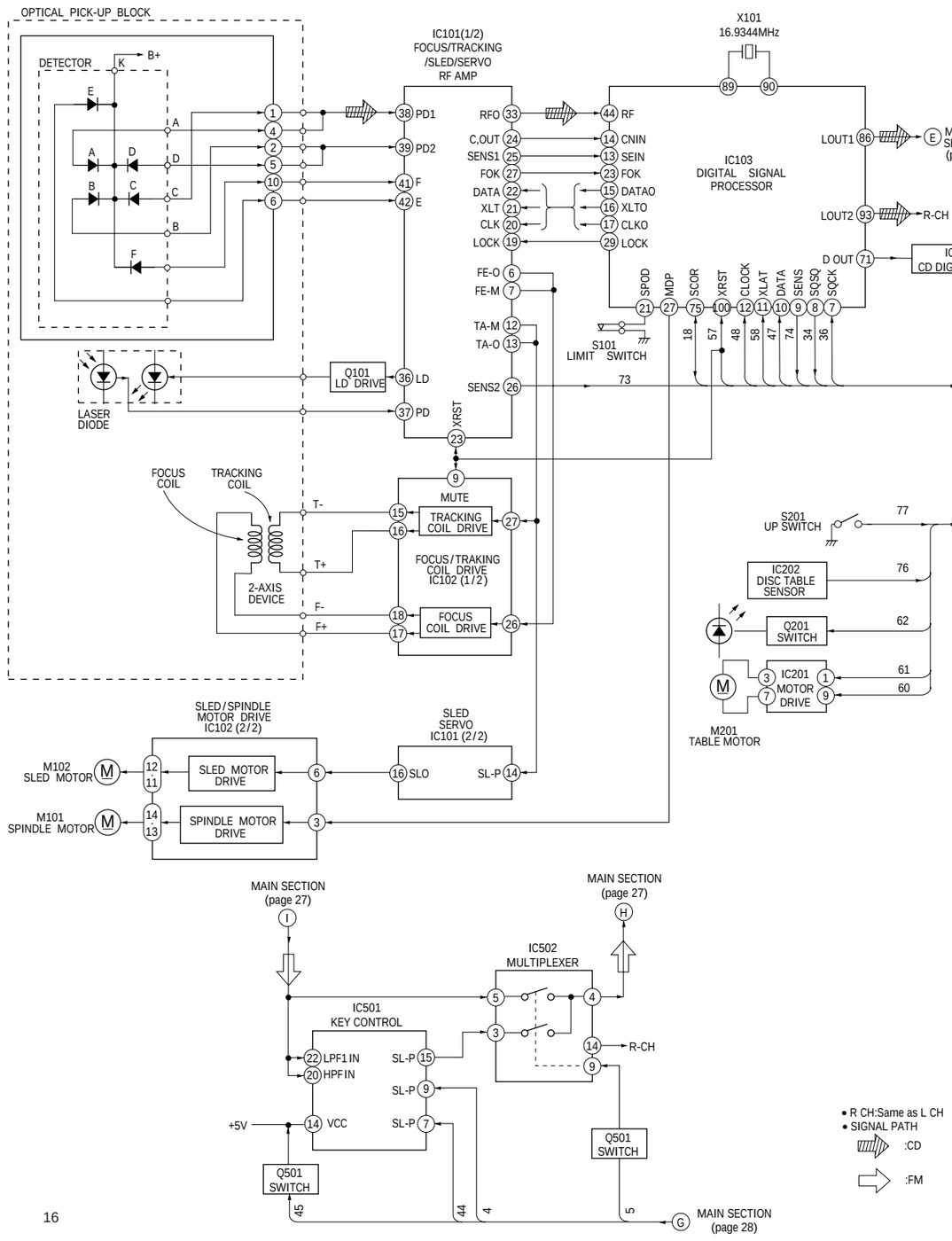
SECTION 6
DIAGRAMS

6-1. CIRCUIT BOARD LOCATION



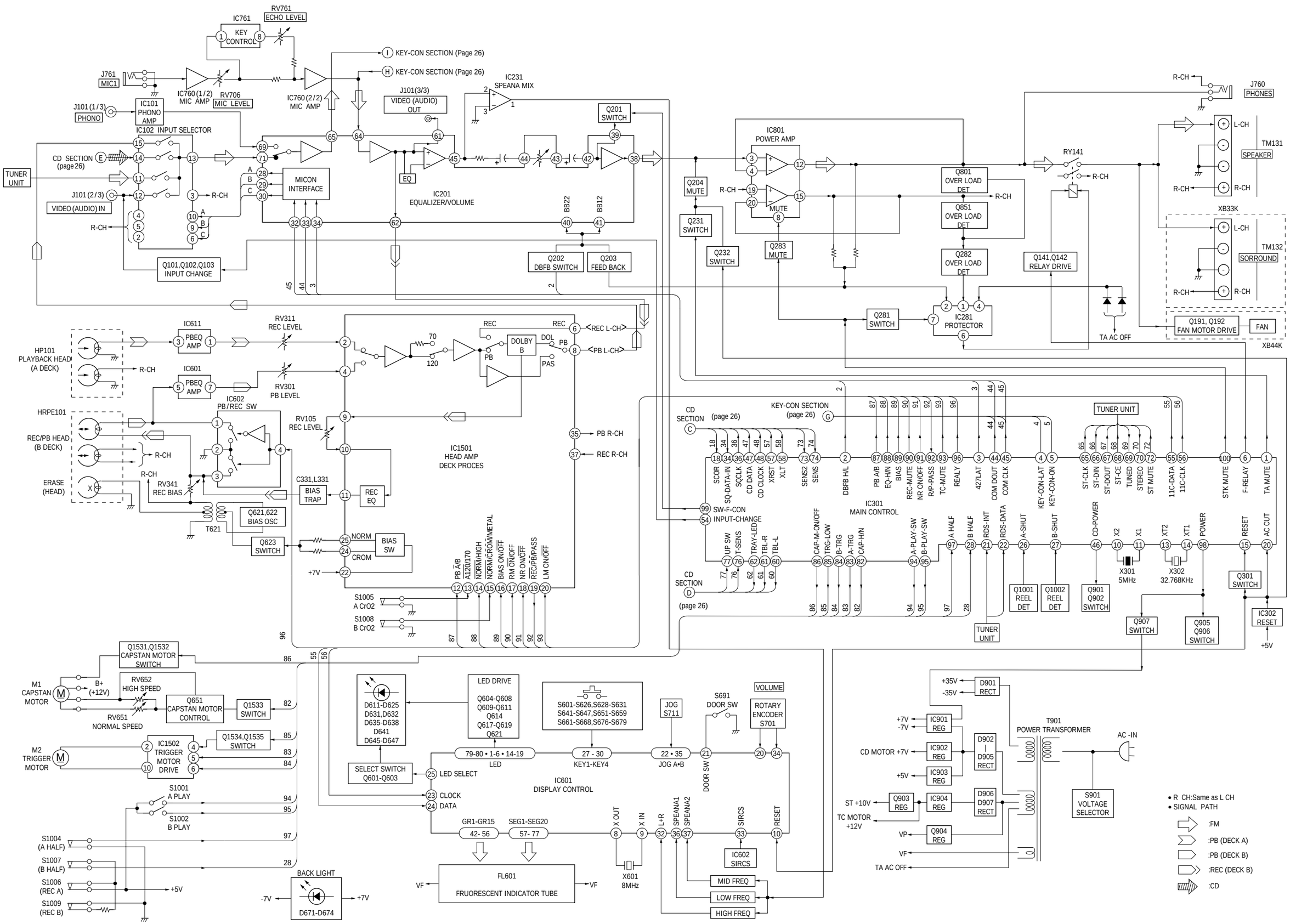


6-2. BLOCK DIAGRAMS – CD/KEY CONTROL SECTION –



HCD-XB33K/XB44K

– MAIN SECTION –



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this necessary note is printed in each block.)

For schematic diagrams.
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- B− : B− Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : VIDEO/MD
  - : PB (DECK A)
  - : PB (DECK B)
  - : REC (DECK B)
  - : CD
  - : PHONO
- Abbreviation

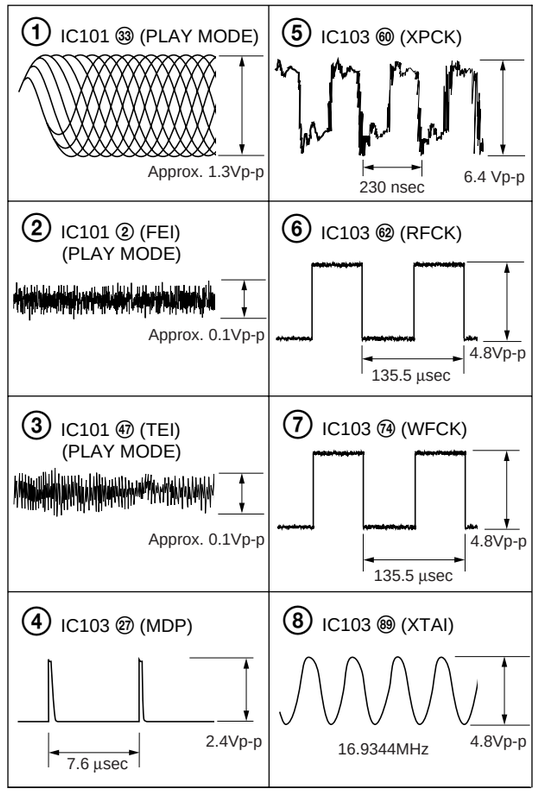
EA : Saudi Arabia
SP : Singapore
MY : Malaysia
IA : Indonesian

For printed wiring boards.
Note:

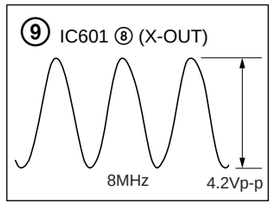
- ○——— : parts extracted from the component side.
- ○ : Through hole.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

• WAVEFORM

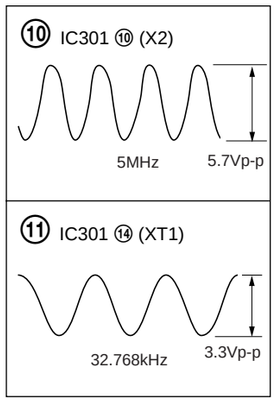
– BD SECTION –



– PANEL SECTION –



– MAIN SECTION –



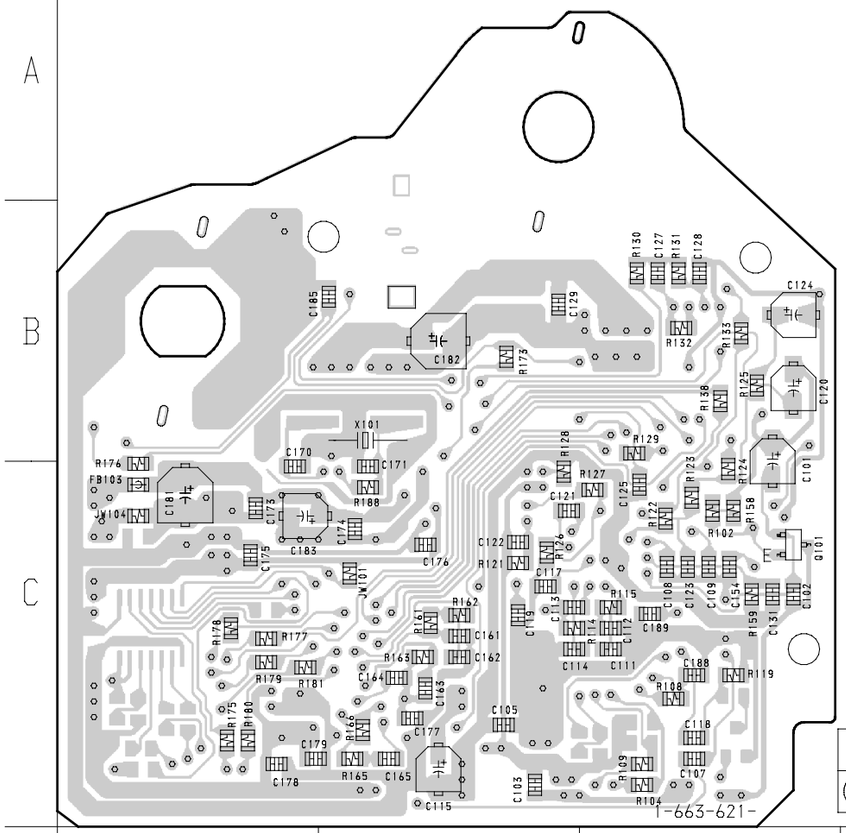
6-3. PRINTED WIRING BOARD – BD SECTION –

• See page 25 for Circuit Board Location.

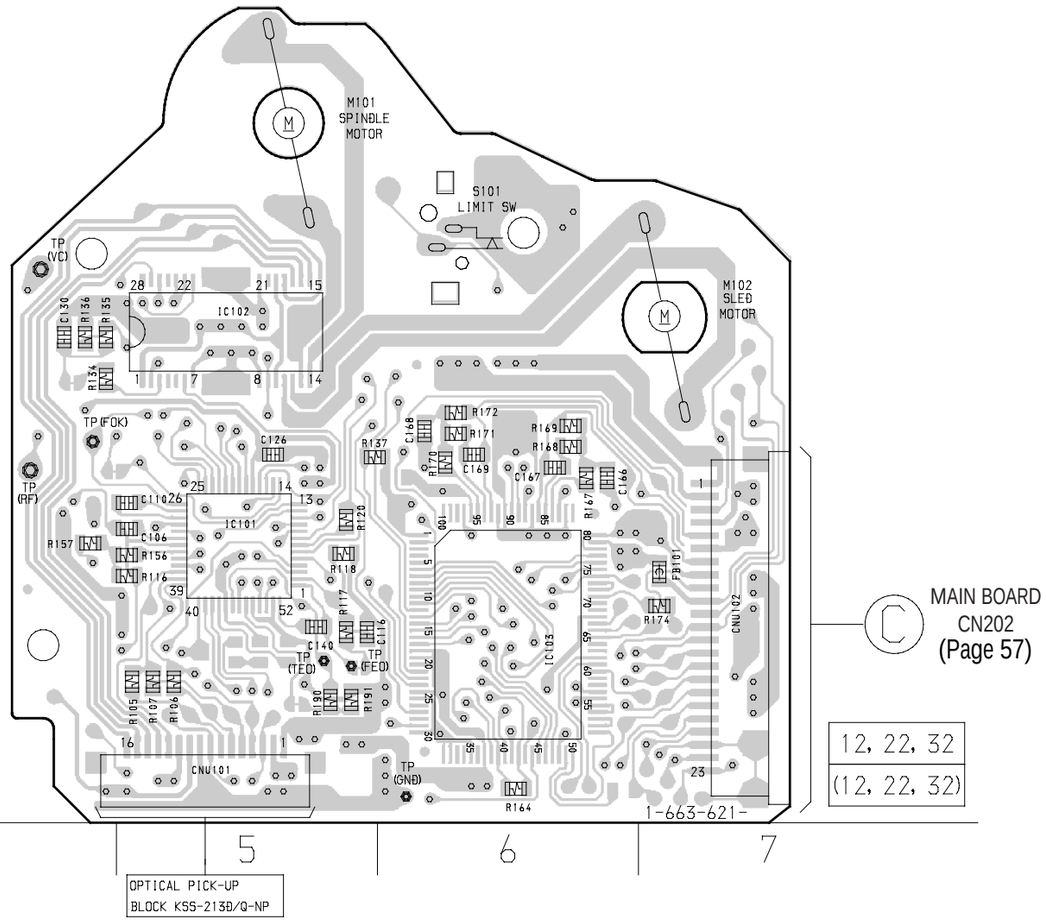
• **Semiconductor Location**

Ref. No.	Location
IC101	C-5
IC102	B-5
IC103	C-6
Q101	C-3

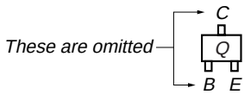
【BÐ BOARÐ】 (Component Side)



【BÐ BOARÐ】 (Conductor Side)

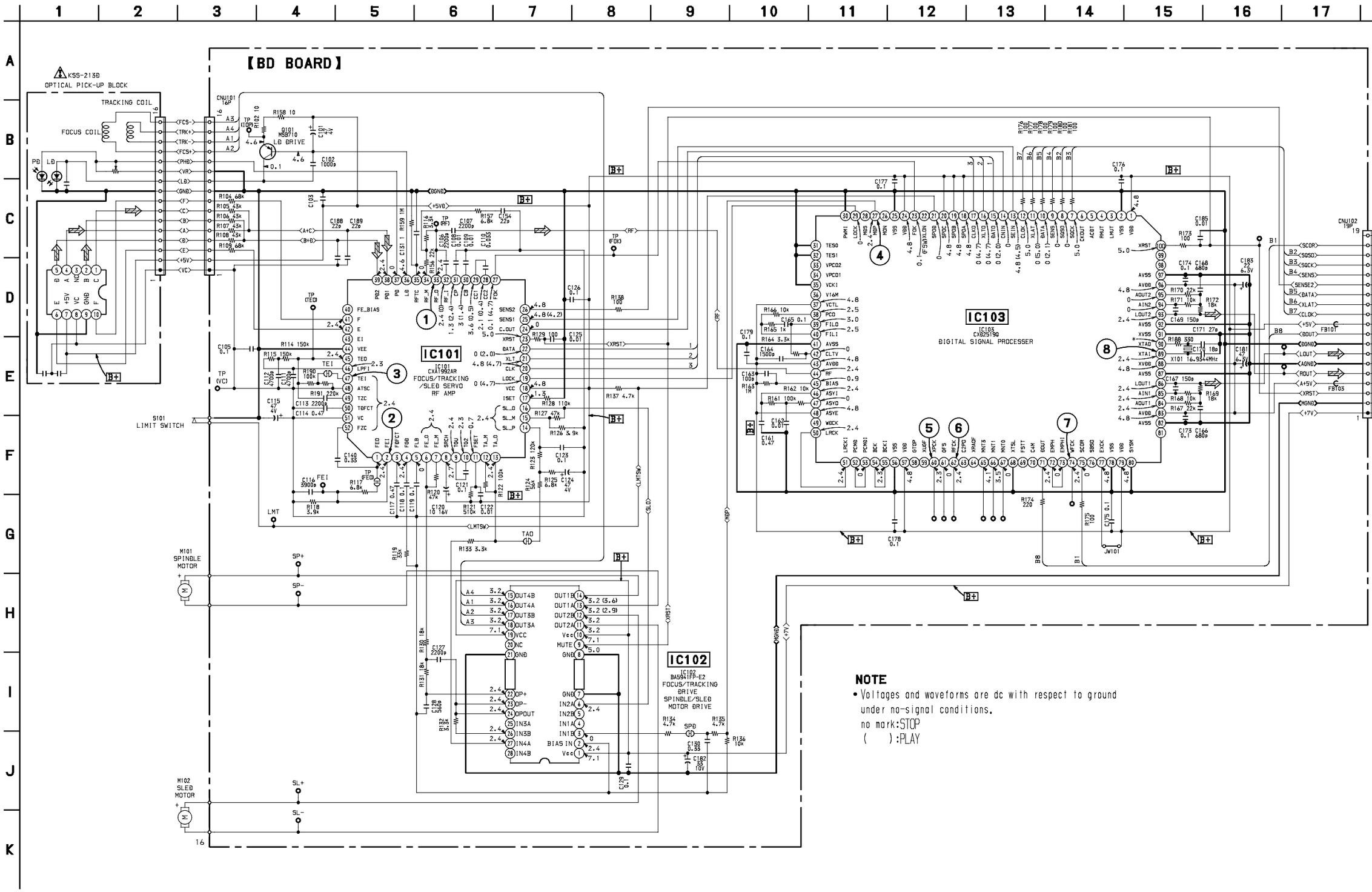


• **Indication of transistor**



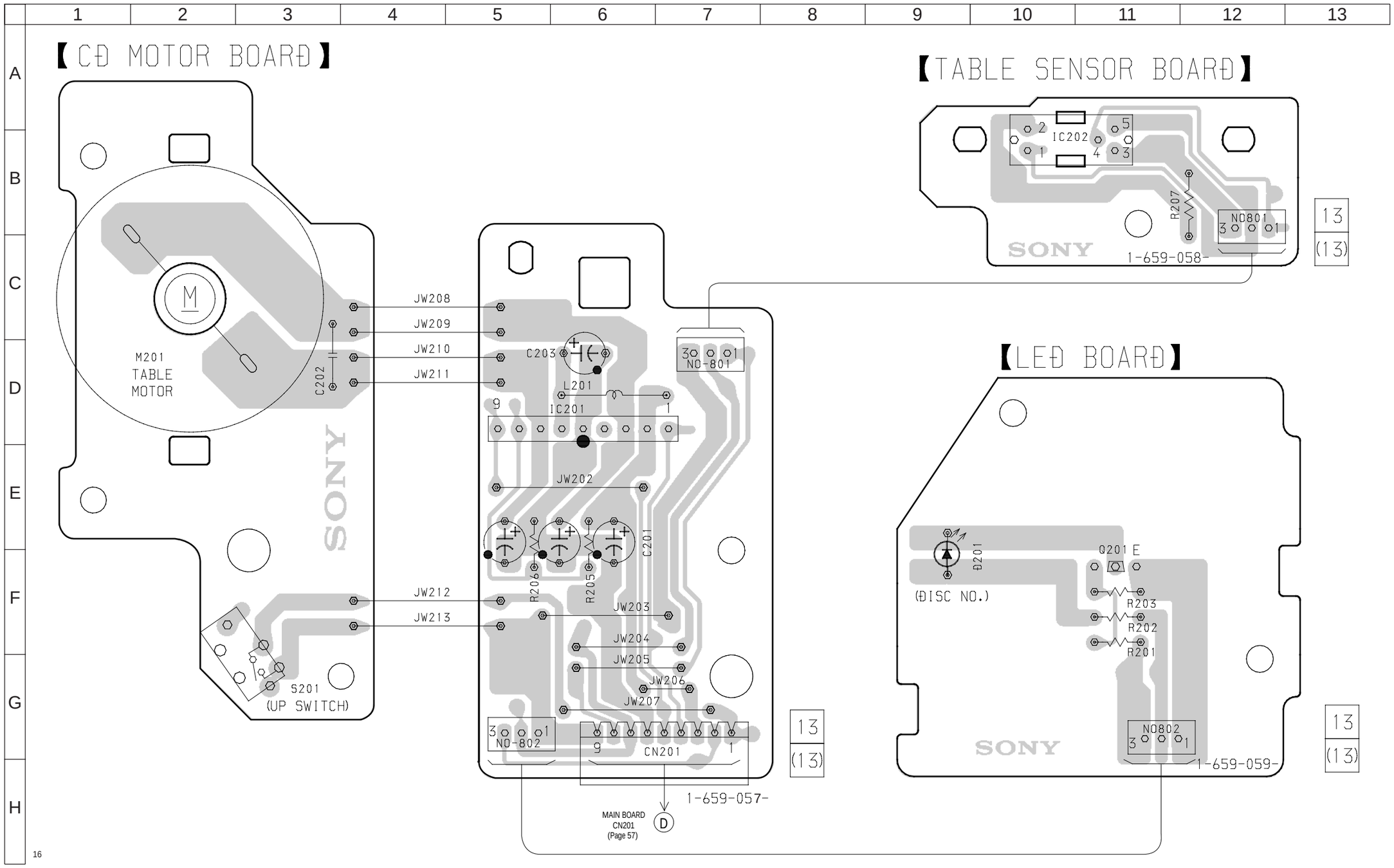
6-4. SCHEMATIC DIAGRAM – BD SECTION –

• See page 30 for Waveforms. • See page 71 for IC Block Diagrams.

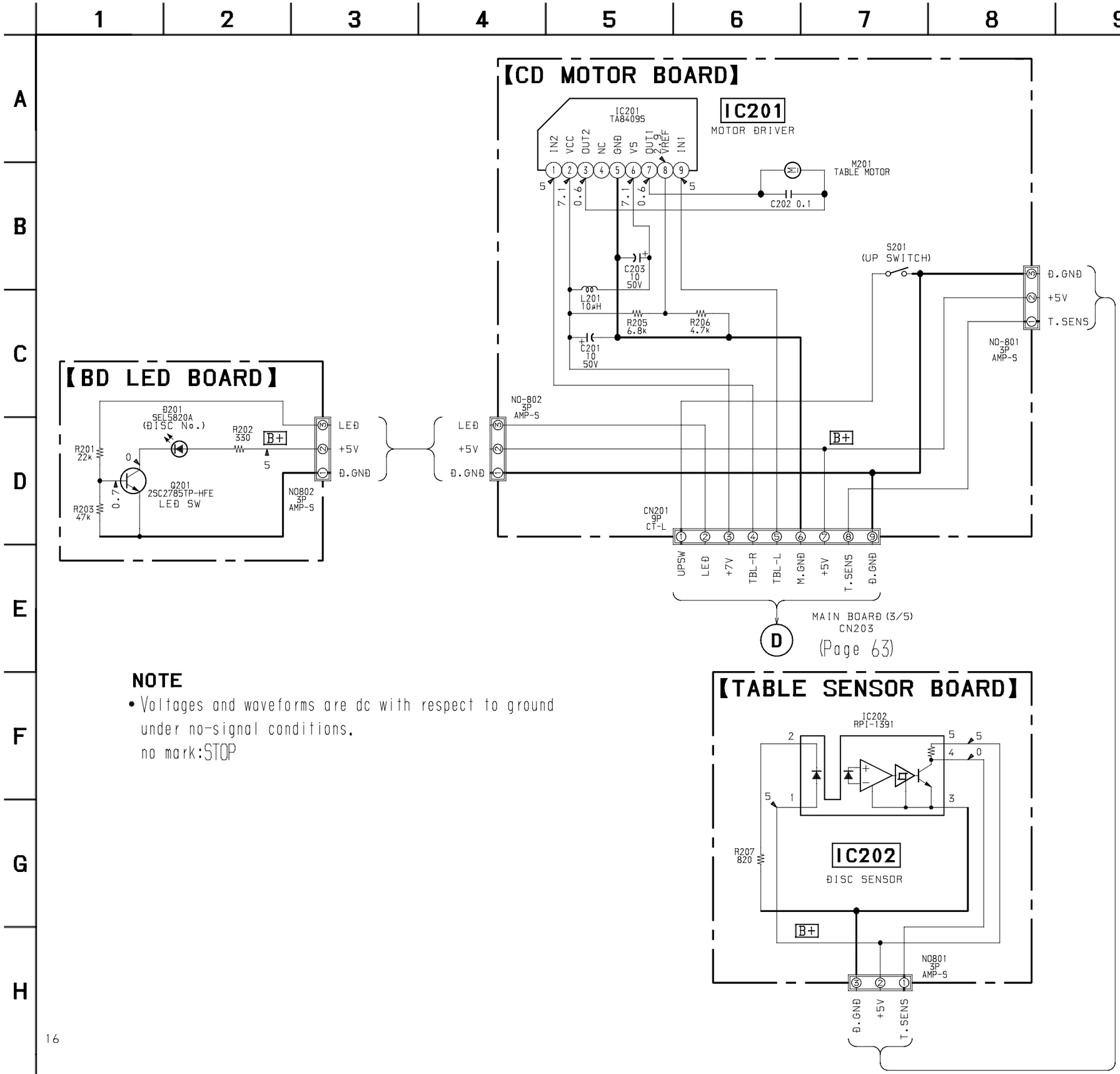


6-5. PRINTED WIRING BOARD – CD MOTOR SECTION –

• See page 25 for Circuit Board Location.



6-6. SCHEMATIC DIAGRAM – CD MOTOR SECTION –



NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:STOP

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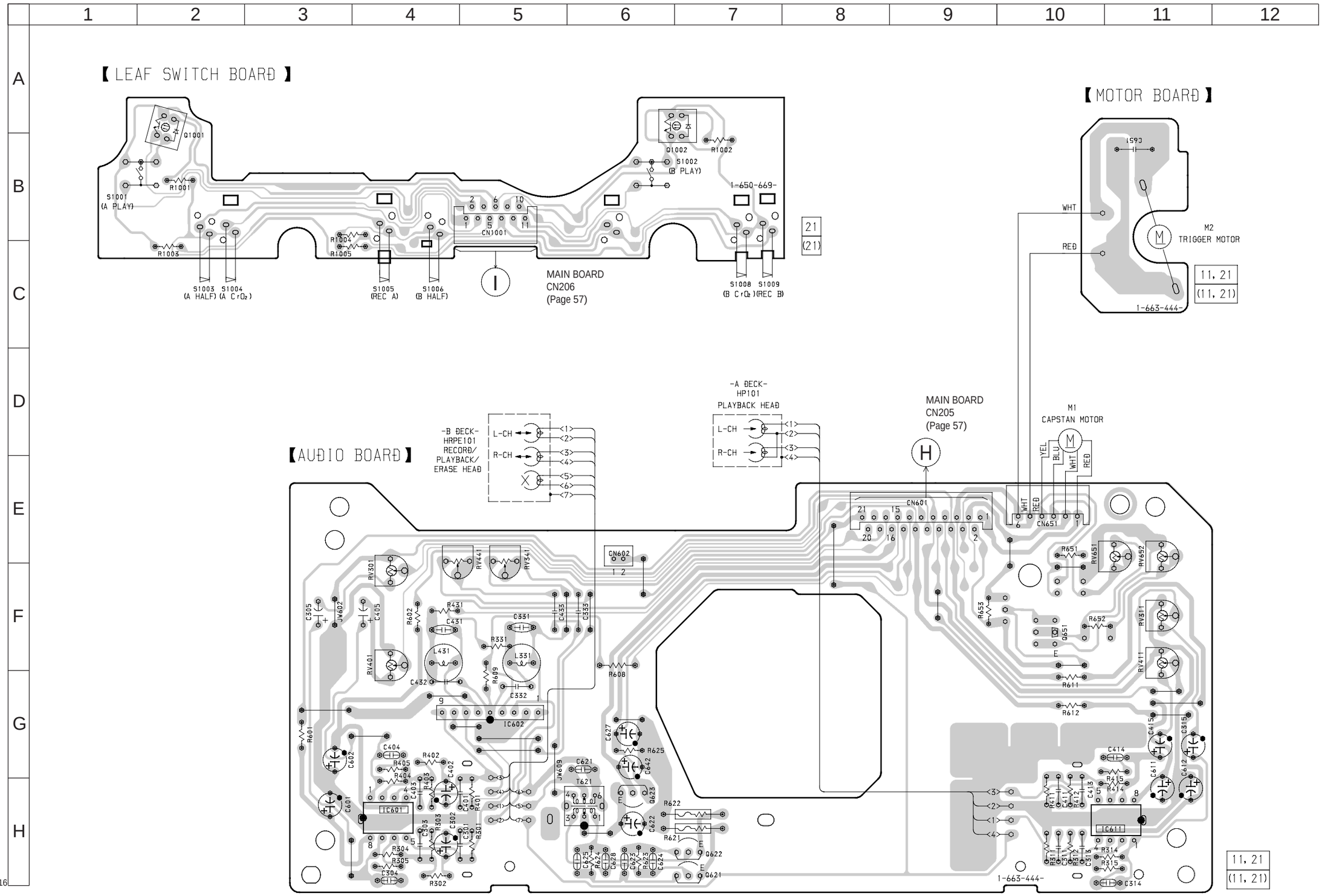
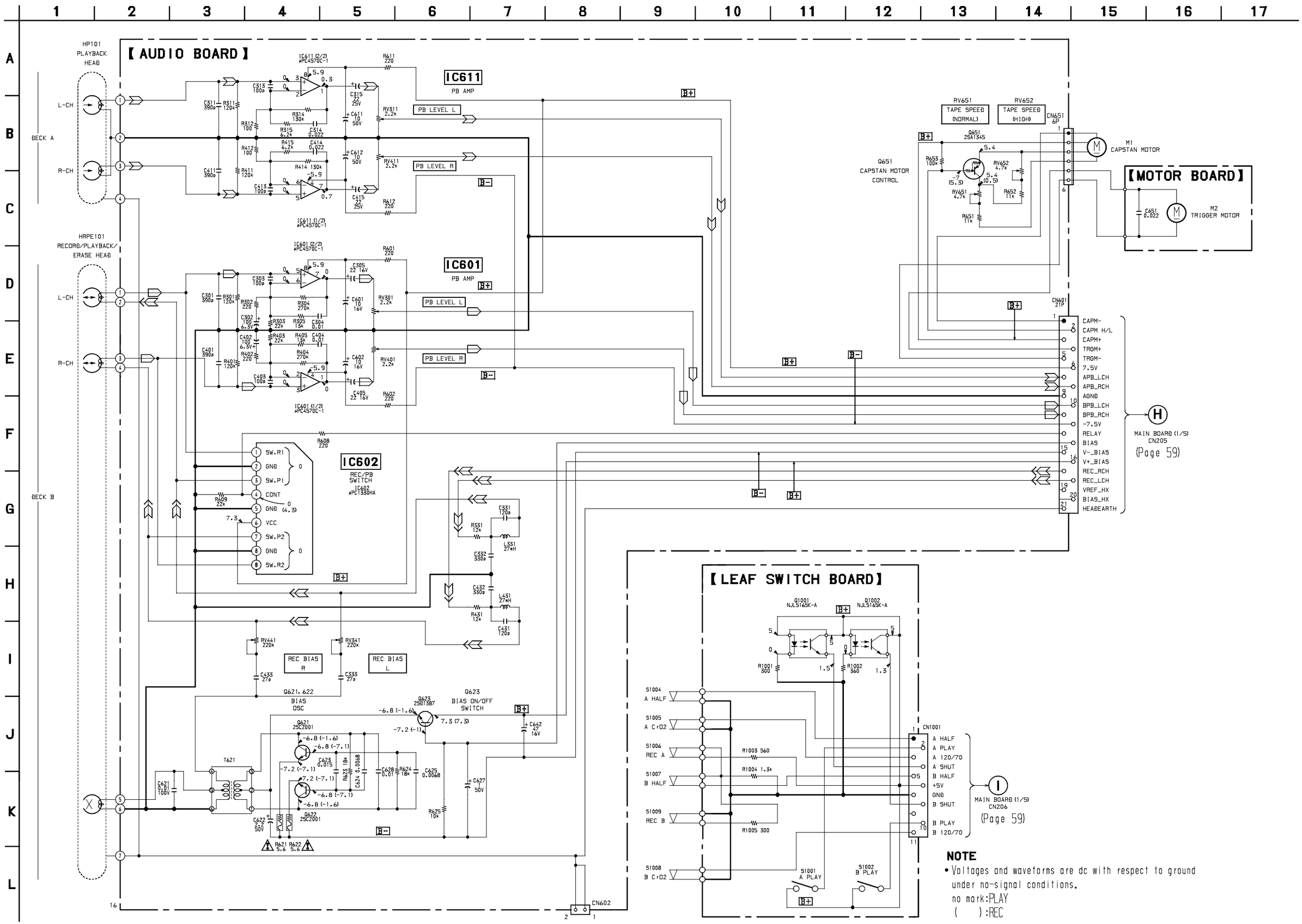
6-7. PRINTED WIRING BOARD – DECK SECTION –

• **Semiconductor Location**

Ref. No.	Location
IC601	H-4
IC602	G-5
IC611	H-11
Q621	H-7
Q622	H-7
Q623	H-6
Q651	F-10
Q1001	A-2
Q1002	A-7



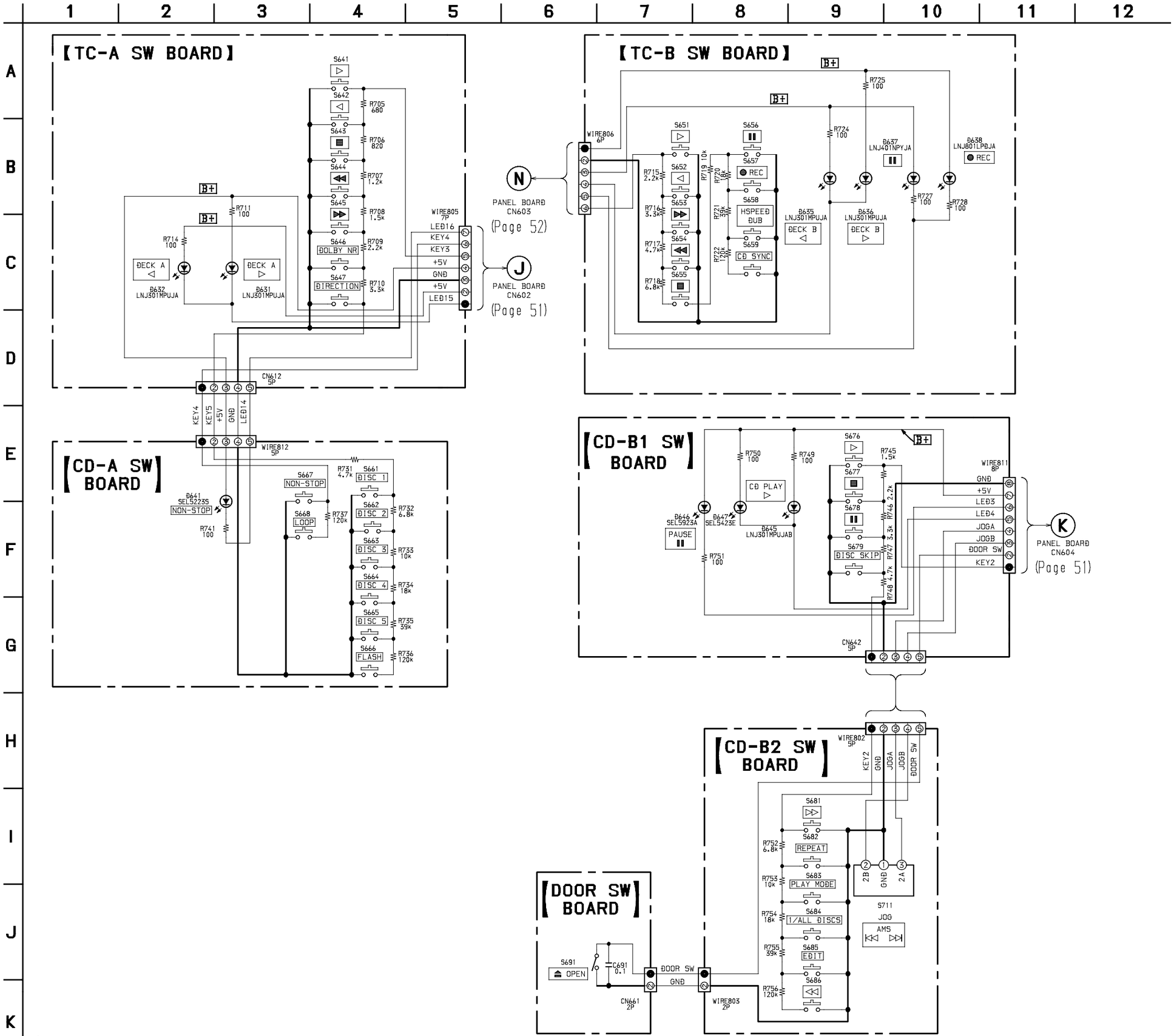
6-8. SCHEMATIC DIAGRAM – DECK SECTION –



NOTE

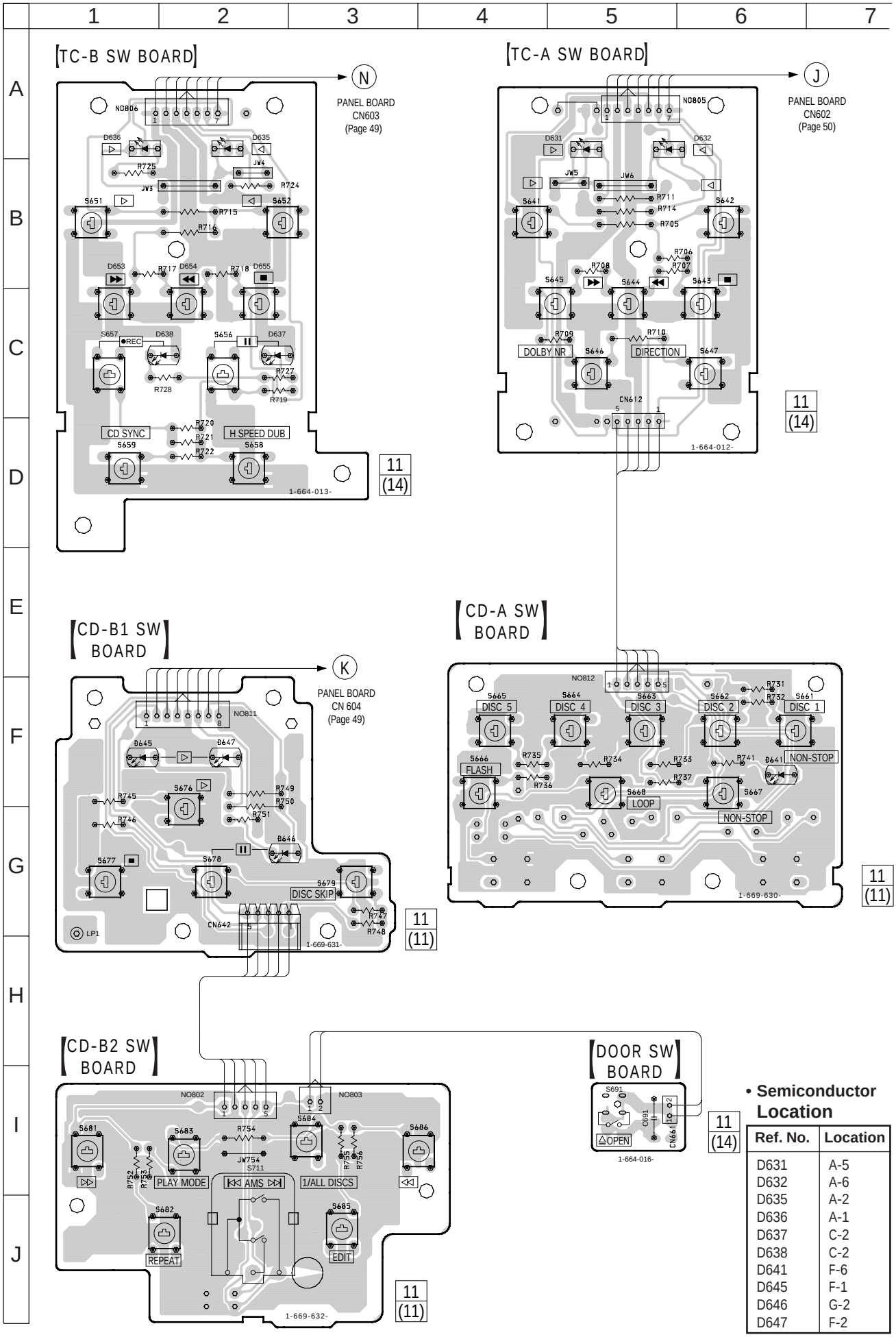
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:PLAY
  ( ):REC

6-9. SCHEMATIC DIAGRAM – SWITCH SECTION –



6-14. PRINTED WIRING BOARD – SWITCH SECTION –

• See page 25 for Circuit Board Location.



• **Semiconductor Location**

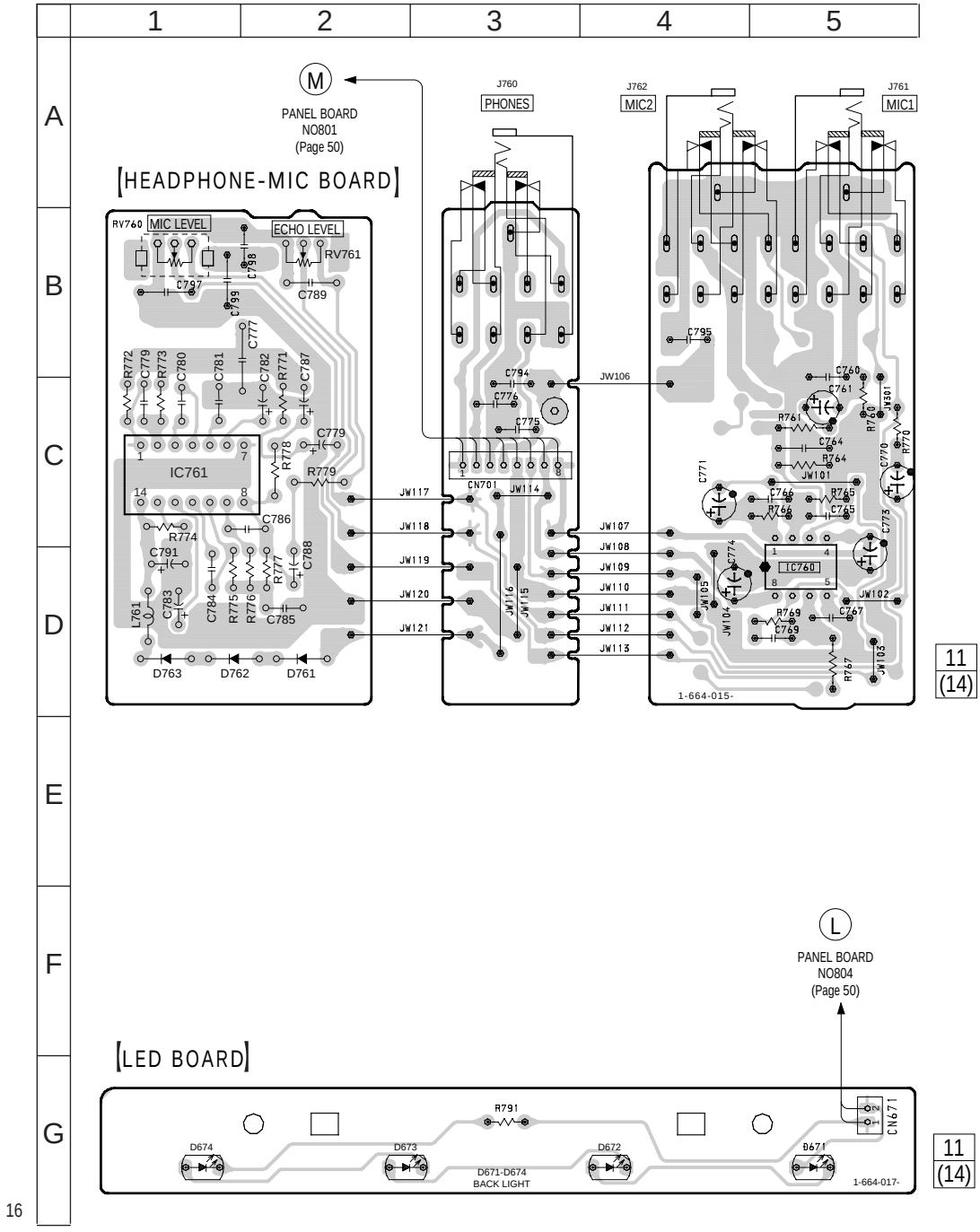
Ref. No.	Location
D631	A-5
D632	A-6
D635	A-2
D636	A-1
D637	C-2
D638	C-2
D641	F-6
D645	F-1
D646	G-2
D647	F-2

6-15. PRINTED WIRING BOARD – HEADPHONE-MIC SECTION –

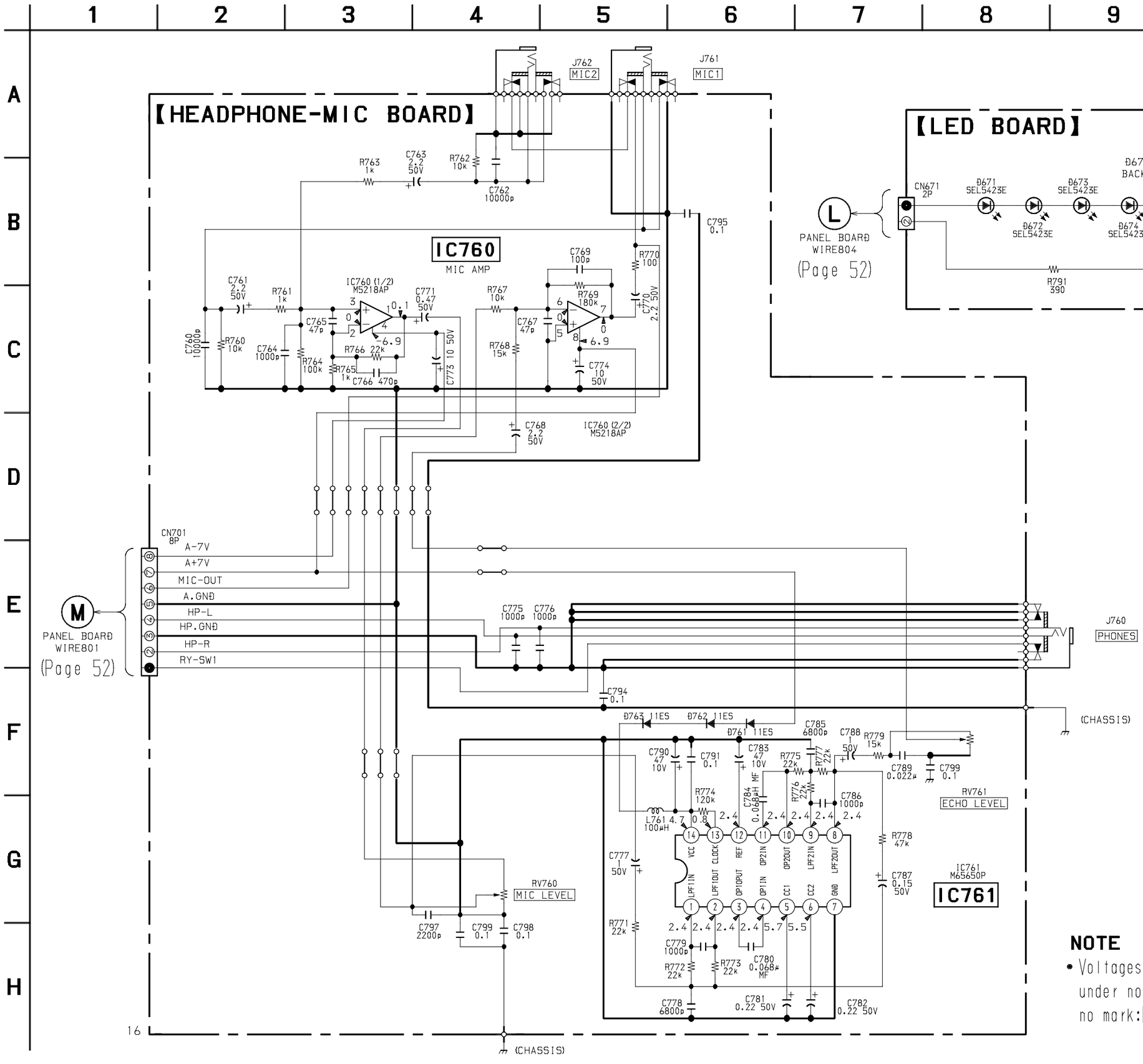
• See page 25 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D671	G-5
D672	G-4
D673	G-2
D674	G-1
IC760	D-5



6-12. SCHEMATIC DIAGRAM – HEADPHONE-MIC SECTION –

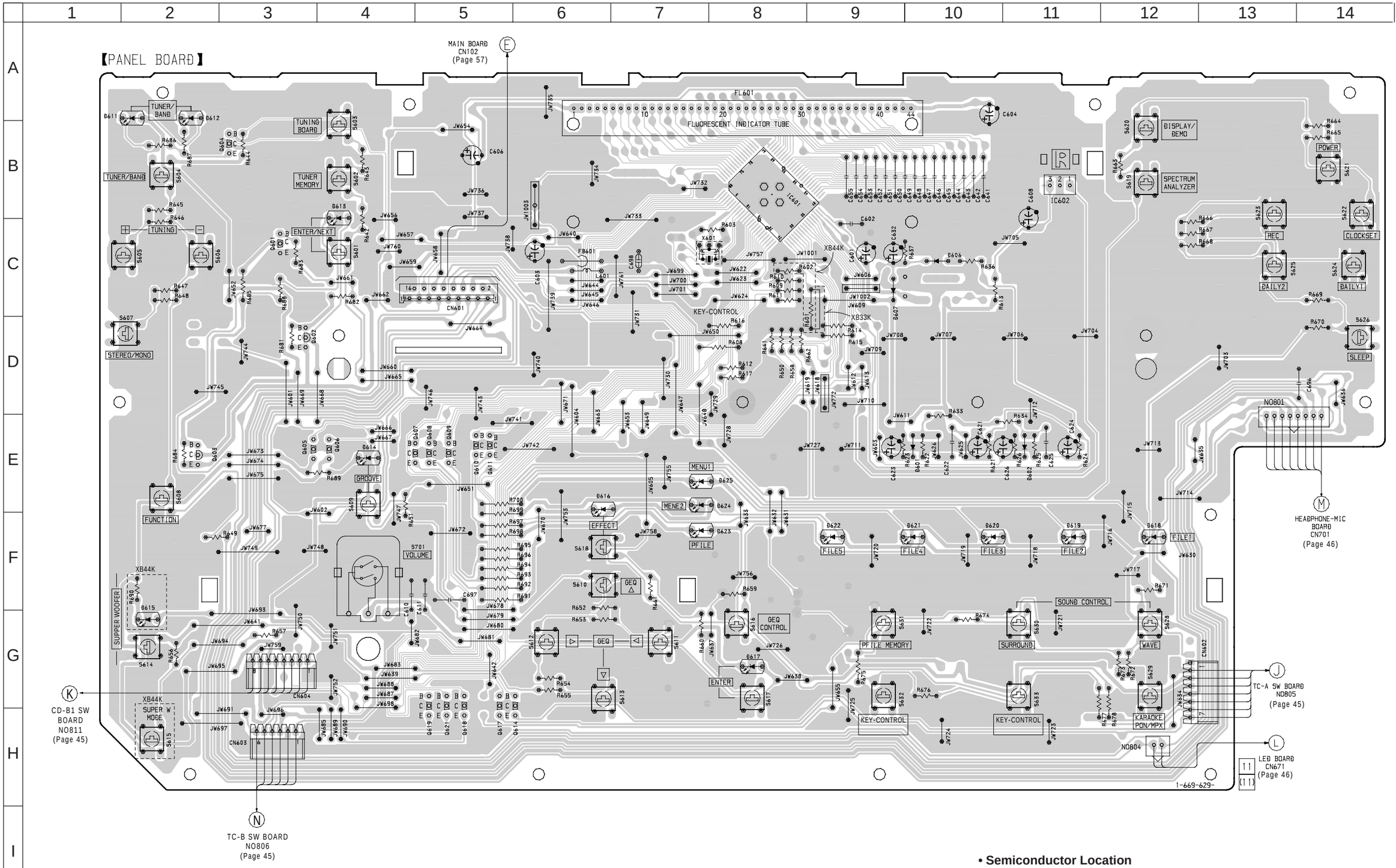


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:FM

6-13. PRINTED WIRING BOARD – PANEL SECTION –

• See page 25 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D601	E-10	D617	G-8	IC601	B-8	Q608	E-5
D602	E-11	D618	F-12	IC602	B-11	Q609	E-5
D606	C-10	D619	F-11			Q610	E-5
D607	C-9	D620	F-10	Q601	B-8	Q611	E-5
D611	A-2	D621	F-10	Q602	D-3	Q614	G-5
D612	A-2	D622	F-9	Q603	E-2	Q617	G-5
D613	C-4	D623	F-7	Q604	B-3	Q618	G-5
D614	E-4	D624	E-7	Q605	E-3	Q619	G-5
D615	G-2	D625	E-7	Q606	E-4	Q621	G-5
D616	E-6			Q607	E-4		

6-14. SCHEMATIC DIAGRAM – PANEL SECTION –

• See page 30 for Waveforms. • See page 78 for IC Pin Functions.

【PANEL BOARD】

FL601
FLUORESCENT INDICATOR TUBE

IC601
IC601
TMP87CH74-6638
DISPLAY CONTROL

IC602
IC602
NJL5604400
SIRCS

S701
VOLUME

CN602 7P
LED16
KEY4
KEY3
+5V
GND
+5V
LED15

J
TC-A SW BOARD WIRE805
(Page 43)

CN604 8P
GND
+5V
LED3
LED4
JOGA
JOGB
DOOR SW
KEY2

K
CD-BISW BOARD WIRE811
(Page 44)

WIRE804 2P
L
LED BORD CN671
(Page 48)

WIRE801 8P
A-7V
A+7V
MIC-OUT
A.GND
HP-L
HP.GND
HP-R
RY-SW1

M
HEADPHONE-MIC BOARD CN701
(Page 47)

CN601
B+5V
B.GND
CLOCK
DATA
RESET
VF
VP
SPE-ANA
A+7V
MIC-OUT
A-7V
A.GND
RY-SW1
HP-L
HP.GND
HP-R

E
MAIN BOARD (5/5) CN102
(Page 64)

CN603 6P

N
TC BSW BOARD WIRE806
(Page 43)

SPECTRUM ANALYZER S619
WAVE S628
DISPLAY /DEMO S620
POWER S621
CLOCK SET S622
REC S623
DAILY 1 S624
DAILY 2 S625
SLEEP S626
KARAOKEPON /MPX S629
SURROUND S630
P FILE MEMORY S631
KEY-CONTROL # S632
KEY-CONTROL ♭ S633
GEQ CONTROL S616
ENTER S617
EFFECT S618
PTY S634
GROOVE S609
GEQ△ S610
GEQ◁ S611
GEQ▷ S612
GEQ▽ S613
SUPER WOOFER S614
SUPER W MODE S615
ENTER/NEXT S601
TUNER MEMORY S602
TUNING MODE S603
TUNER/BAND S604
TUNING + S605
TUNING - S606
STEREO/MONO S607
FUNCTION S608

F1 LOW FREQ.
F2 MID FREQ.
F3 HIGH FREQ.

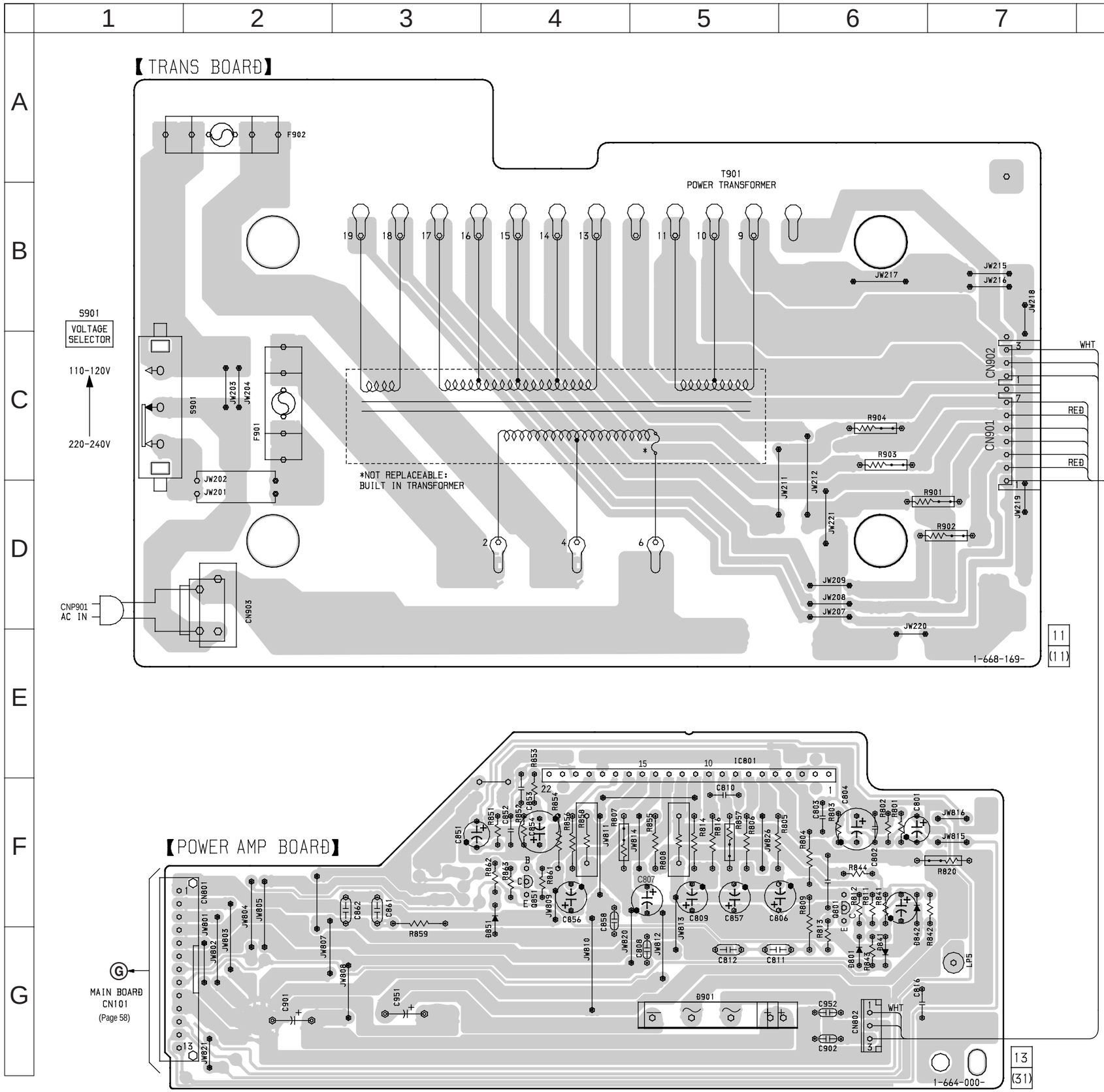
Q601-Q611, Q614 , Q617, Q618 LED SWITCH
Q619-Q621 LED SWITCH

NOTE

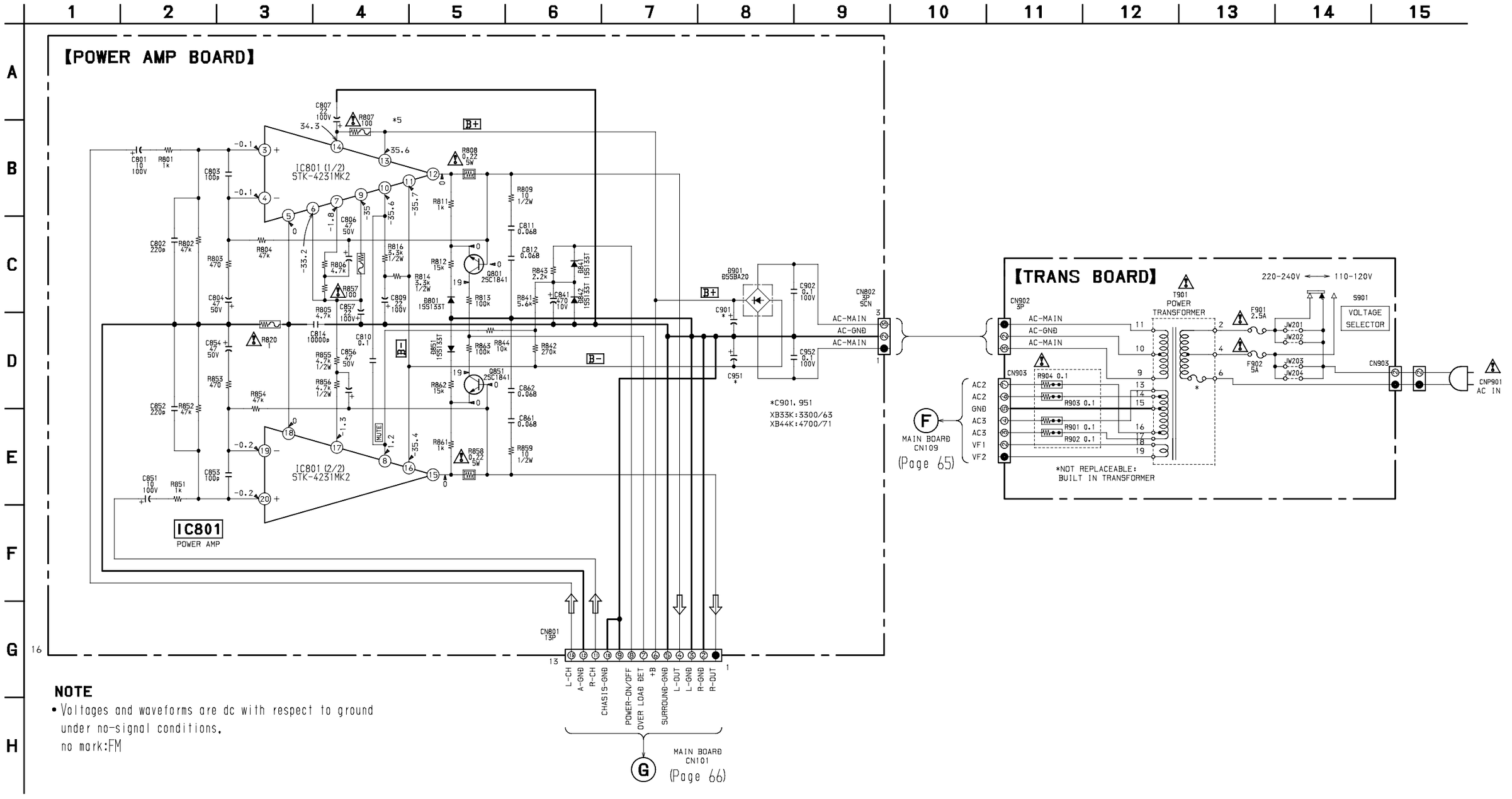
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:FM
  * :can not be measured.

6-15. PRINTED WIRING BOARD – POWER SECTION –

• See page 25 for Circuit Boards Location.



6-16. SCHEMATIC DIAGRAM – POWER SECTION –



NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:FM

6-17. PRINTED WIRING BOARD – MAIN SECTION –

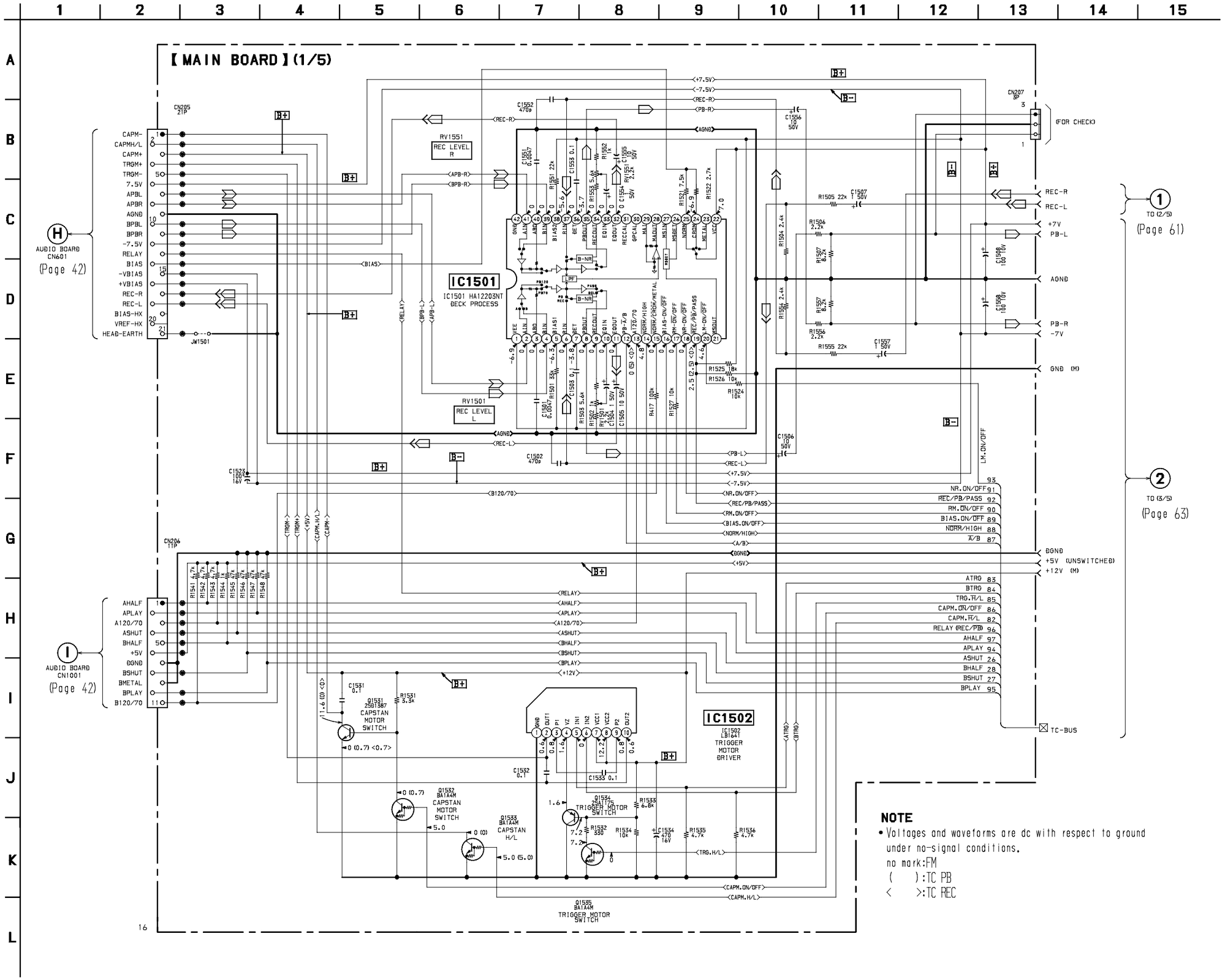
• See page 25 for Circuit Board Location.

6-18. SCHEMATIC DIAGRAM – MAIN SECTION (1/5) –

• See page 74 for IC Block Diagrams.

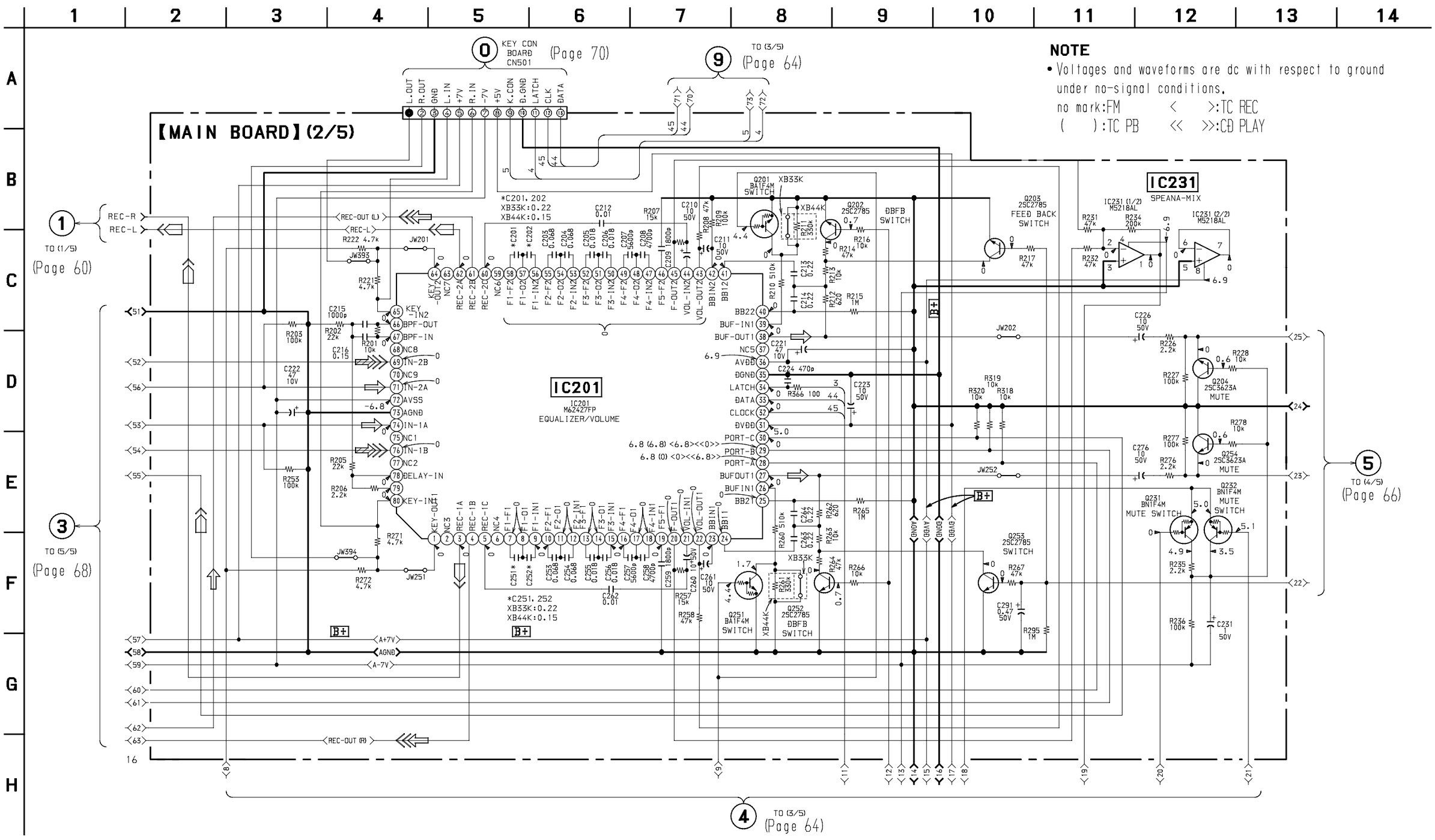
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D141	I-11	IC903	F-4
D191	G-12	IC904	H-4
D192	G-12	IC1501	C-3
D281	I-8	IC1502	D-3
D291	I-9		
D301	E-6	Q101	B-12
D302	E-6	Q102	B-11
D303	F-6	Q103	B-11
D304	F-5	Q141	I-11
D305	F-6	Q142	I-10
D306	E-7	Q151	B-12
D307	F-6	Q191	G-12
D309	F-6	Q192	G-12
D902	I-7	Q201	G-11
D903	I-7	Q202	F-11
D904	J-6	Q203	G-11
D905	J-6	Q204	H-9
D906	J-6	Q231	G-8
D907	J-5	Q232	G-9
D908	J-4	Q251	F-10
D909	J-4	Q252	G-9
D910	J-4	Q253	F-9
D911	J-4	Q254	H-8
D912	G-4	Q281	J-10
D913	G-4	Q282	I-9
D914	F-3	Q283	I-9
D915	I-4	Q301	F-7
D951	J-7	Q901	G-4
D952	J-7	Q902	G-4
		Q903	I-4
IC101	B-11	Q904	J-4
IC102	C-11	Q905	G-4
IC201	E-10	Q906	G-4
IC231	G-7	Q907	H-5
IC281	I-10	Q1531	D-2
IC301	D-5	Q1532	D-2
IC302	F-6	Q1533	D-2
IC391	B-13	Q1534	D-3
IC901	H-4	Q1535	D-2
IC902	H-6		



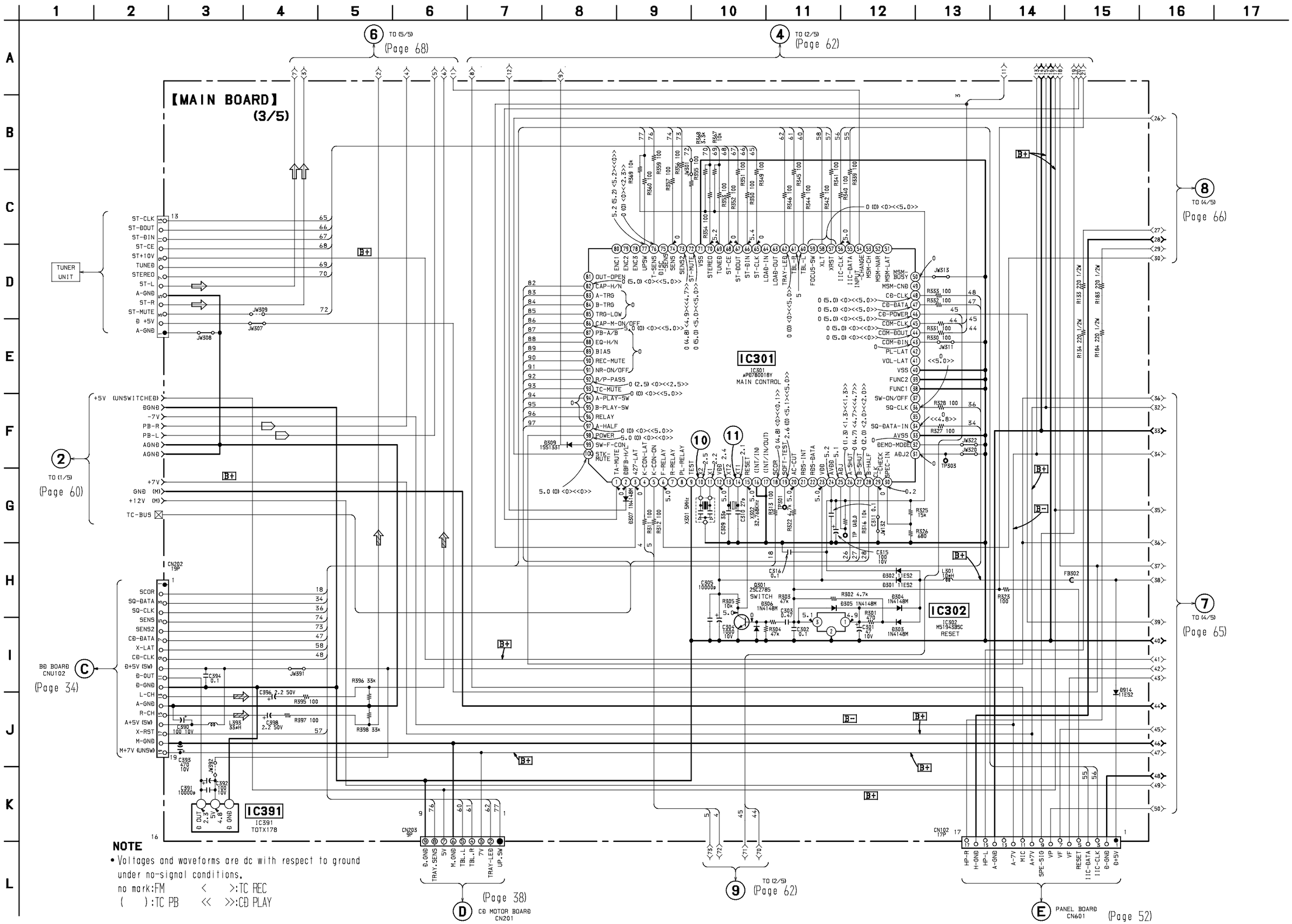
6-19. SCHEMATIC DIAGRAM – MAIN SECTION (2/5) –

• See page 73 for IC Block Diagrams.



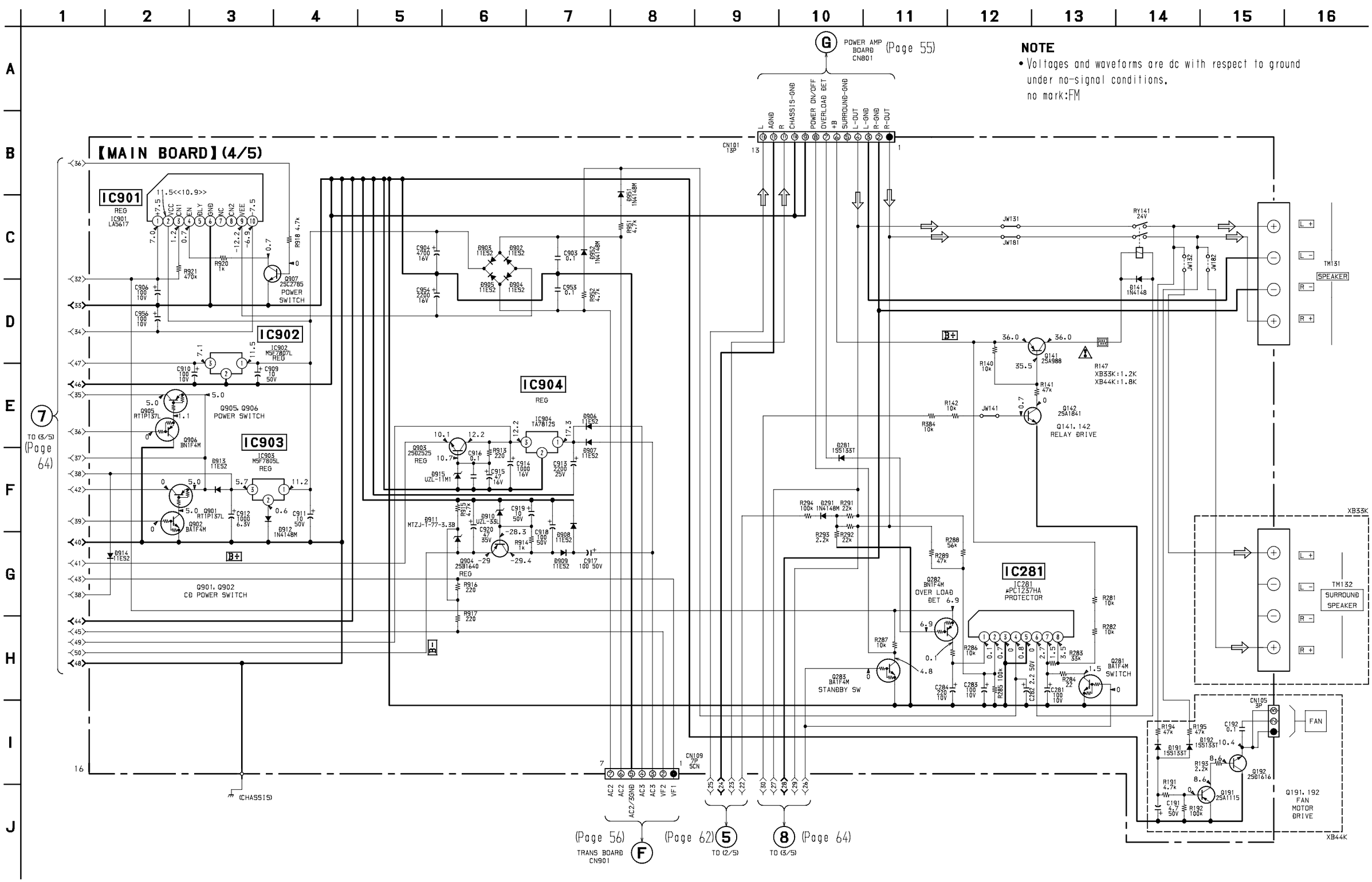
6-20. SCHEMATIC DIAGRAM – MAIN SECTION (3/5) –

• See page 30 for Waveforms. • See page 76 for IC Pin Functions.



6-21. SCHEMATIC DIAGRAM – MAIN SECTION (4/5) –

• See page 30 for Waveforms. • See page 74 for IC Block Diagrams.



NOTE

• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark:FM

6-22. SCHEMATIC DIAGRAM – MAIN SECTION (5/5) – • See page 73 for IC Block Diagrams.

【MAIN BOARD】(5/5)

NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:FM
  ( ):TC PB

IC101

IC101 (1/2) M5218AL

IC101 (2/2) M5218AL

6.9 PHONO AMP

-6.8

6.9 INPUT CHANGE

6.8

6.8 (0)

IC102 MC14052BCP

IC102 INPUT SELECTOR

J101 (1/3) PHONO

J101 (2/3) VIÐEO/MÐ (AUÐIO) IN

J101 (3/3) VIÐEO/MÐ (AUÐIO) OUT

L

R

(CHASSIS)

JW101

JW102

JW151

JW152

B+

B−

R102 1k

R107 1k

R105 560k

R106 47k

R108 100k

R103 47k

R104 1k

C102 100p

C103 100p

C104 2.2 50V

C105 4700p

C106 1500p

C107 0.1 50V

C109 0.1

R158 100k

R153 47k

R154 1k

C152 100p

C154 2.2 50V

C155 4700p

C156 1500p

R155 560k

R156 47k

R152 1k

C153 100p

R157 1k

C157 0.1 50V

R121 3.9k

R123 5.6k

R124 10k

Q101 2SC3623A

Q151 2SC3623A

Q102 BN1F4M 22K/22K

Q103 BA1F4M 22K/22K

R174 10k

R125 100k

R173 5.6k

R171 3.9k

C121 220p

C122 220p

C171 220p

C172 220p

R122 220k

R172 220k

R126 1k

R127 100k

R177 100k

R176 1k

C123 0.01

C173 10000p

VIÐEO-LCH

VIÐEO-RCH

PS-LCH

PS-RCH

CD-RCH

ST-RCH

TCPB-RCH

TCPB-LCH

CD-LCH

ST-LCH

51 52 53 54 55 56 57 58 59 60 61 62 63

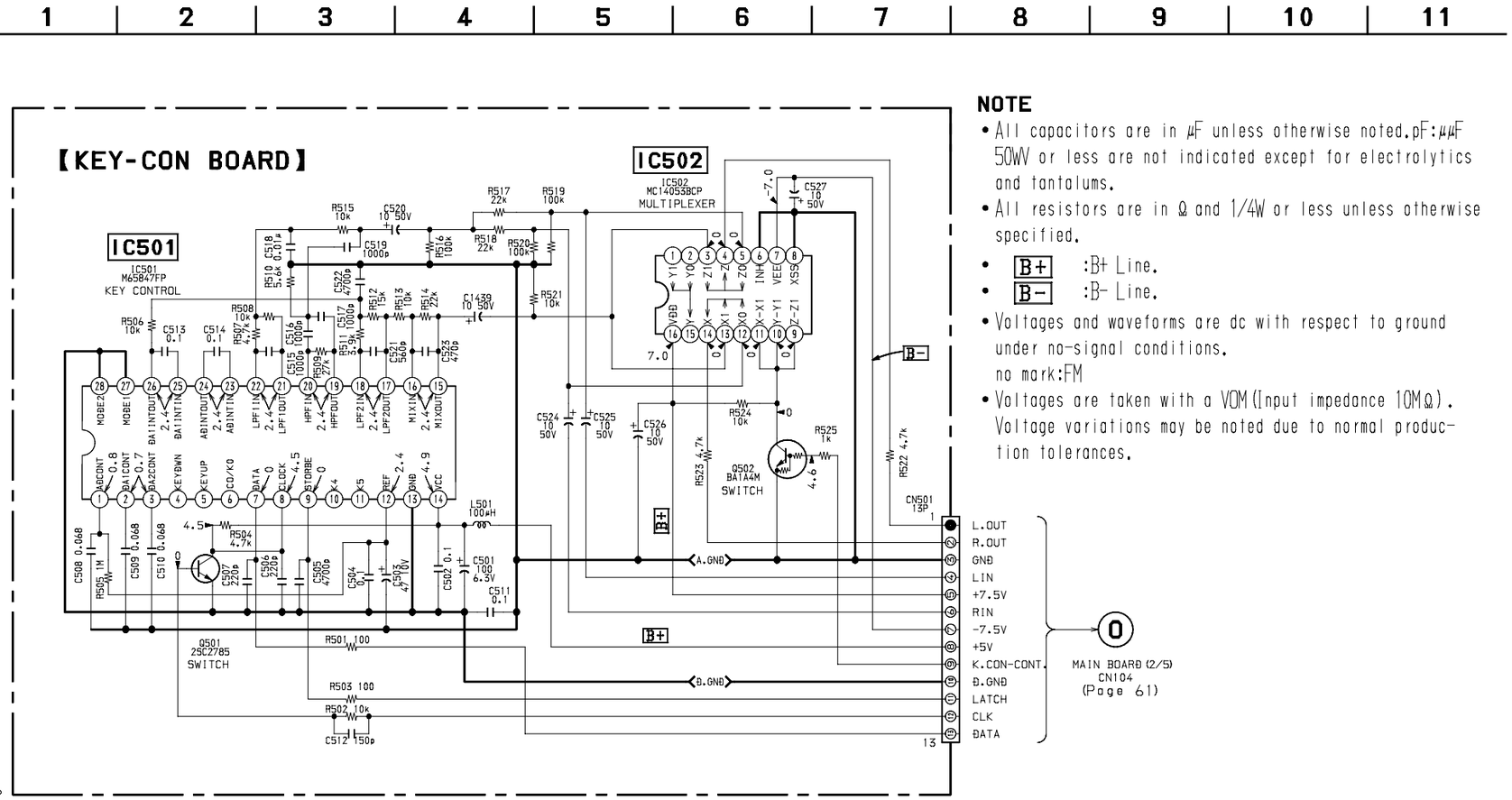
1 2 3 4 5 6 7

16

3 TO (2/5) (Page 61)

6 TO (3/5) (Page 63)

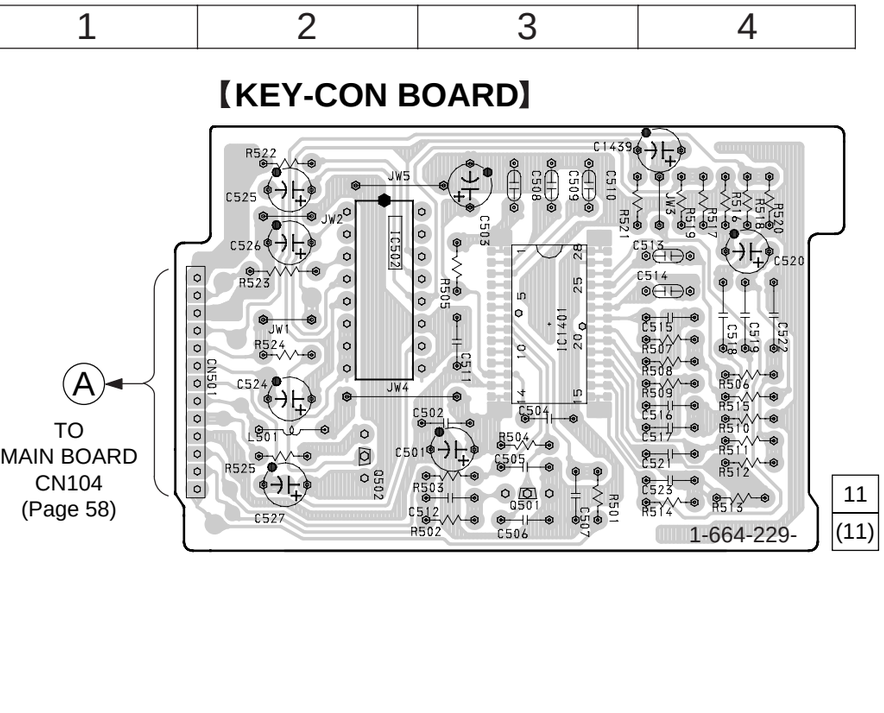
6-23. SCHEMATIC DIAGRAM – KEY-CON SECTION –



NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- B+ :B+ Line.
- B- :B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

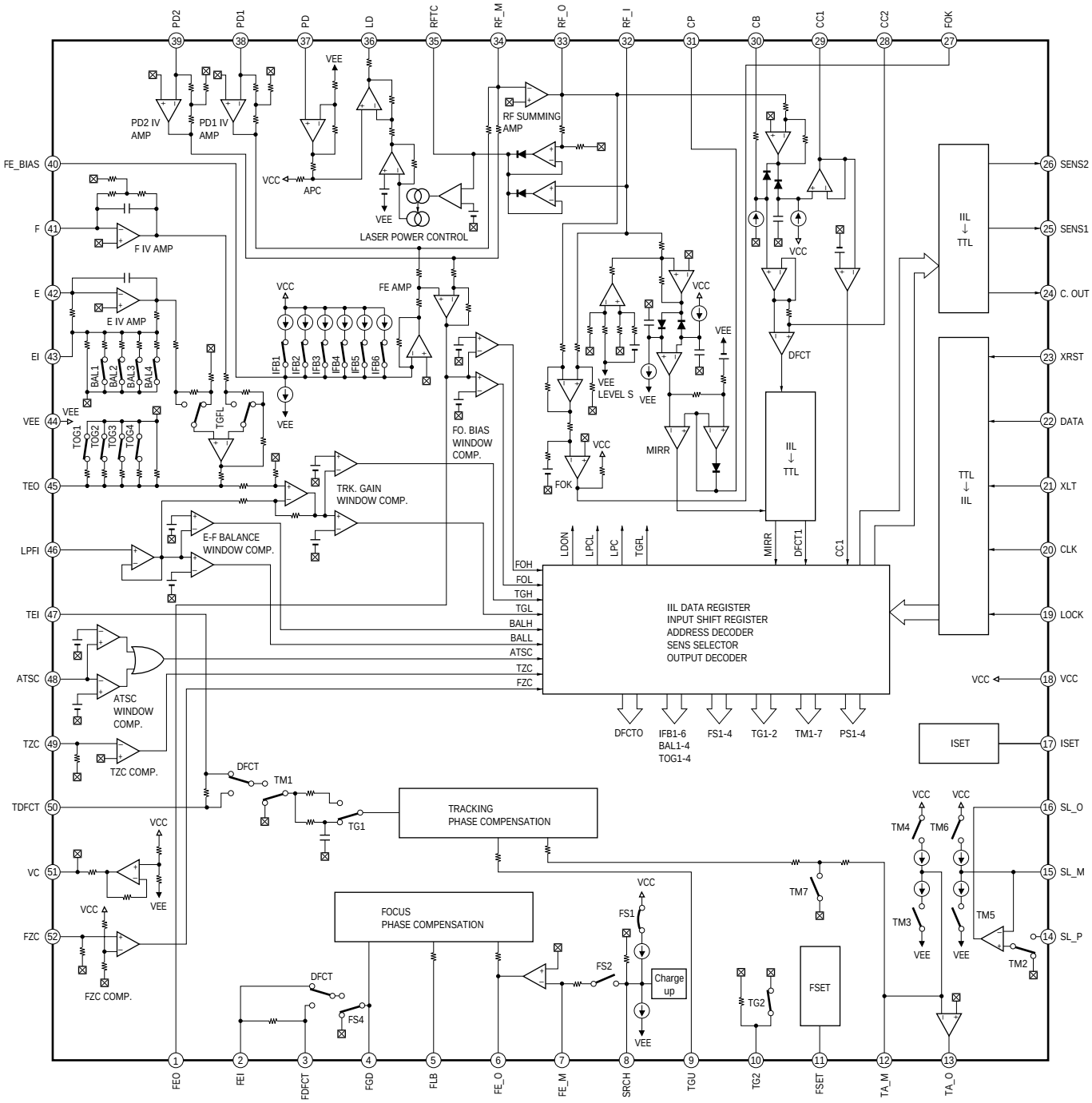
6-24. PRINTED WIRING BOARD – KEY-CON SECTION –



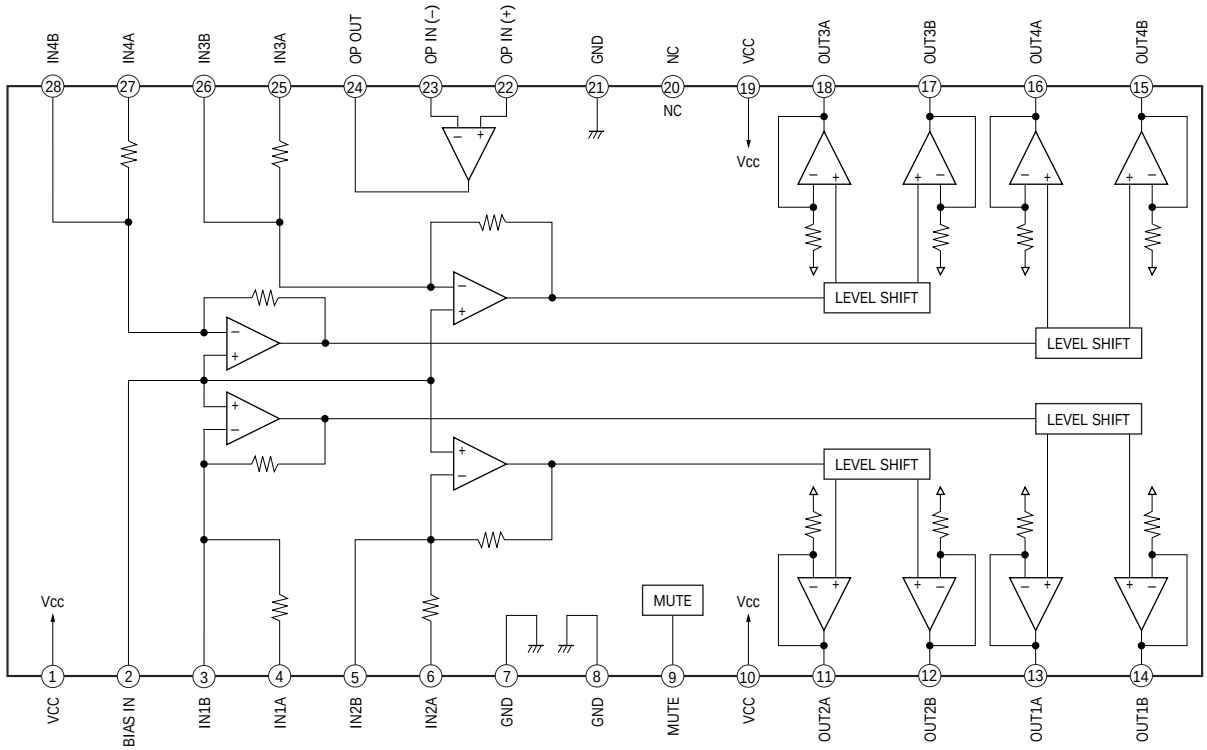
6-25. IC BLOCK DIGARAMS

– BD SECTION –

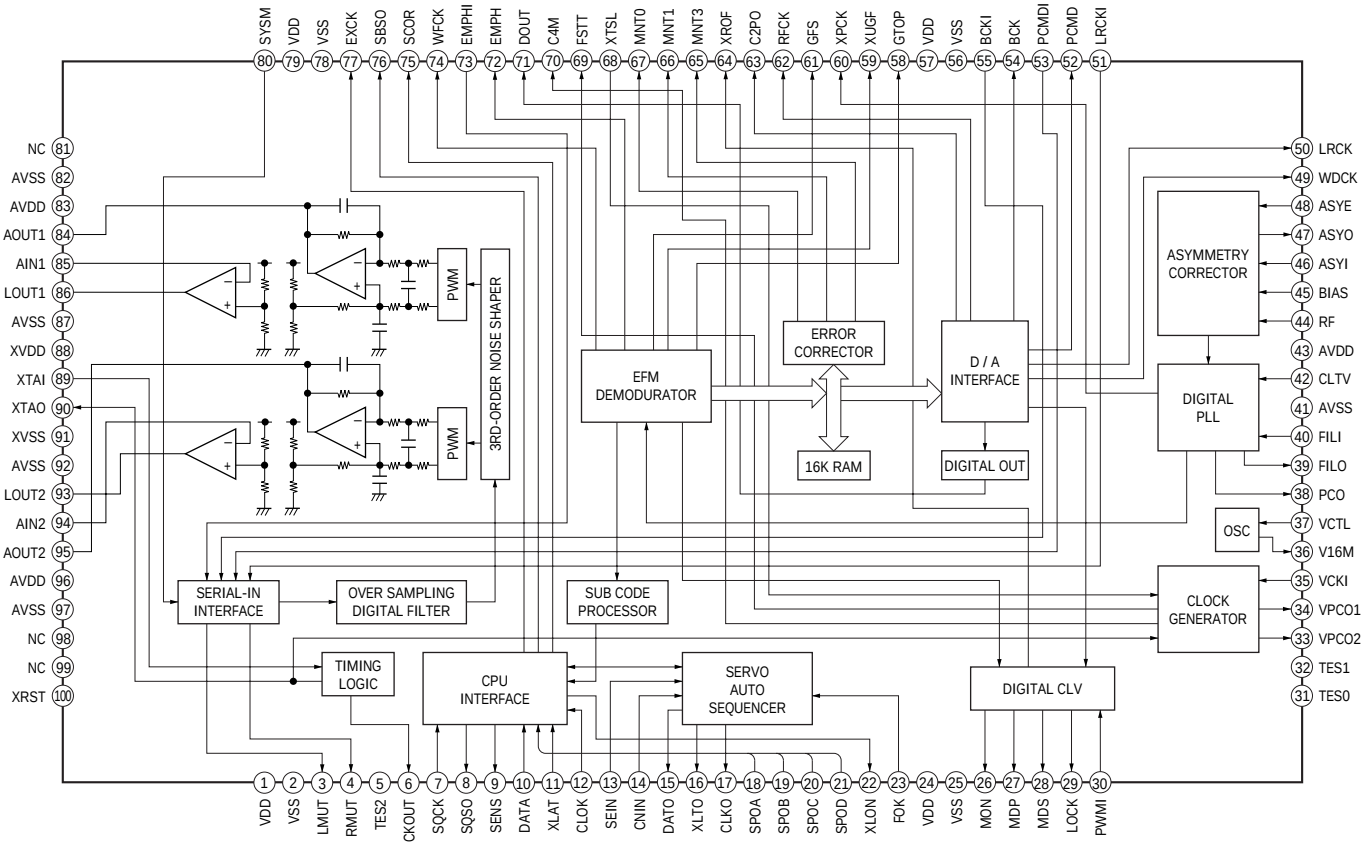
IC101 CXA1992AR



IC102 BA5941FP

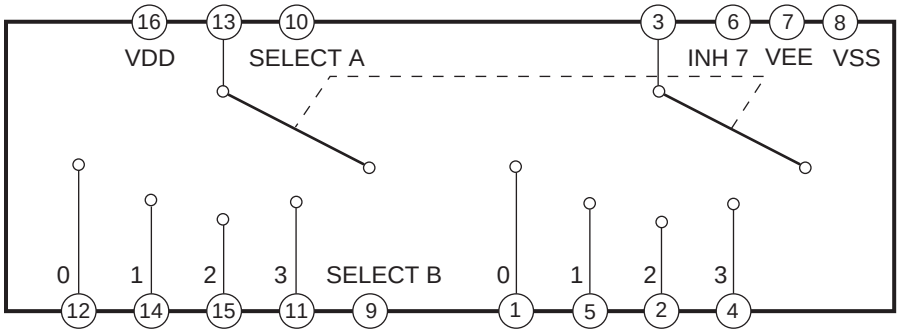


IC103 CXD2519Q

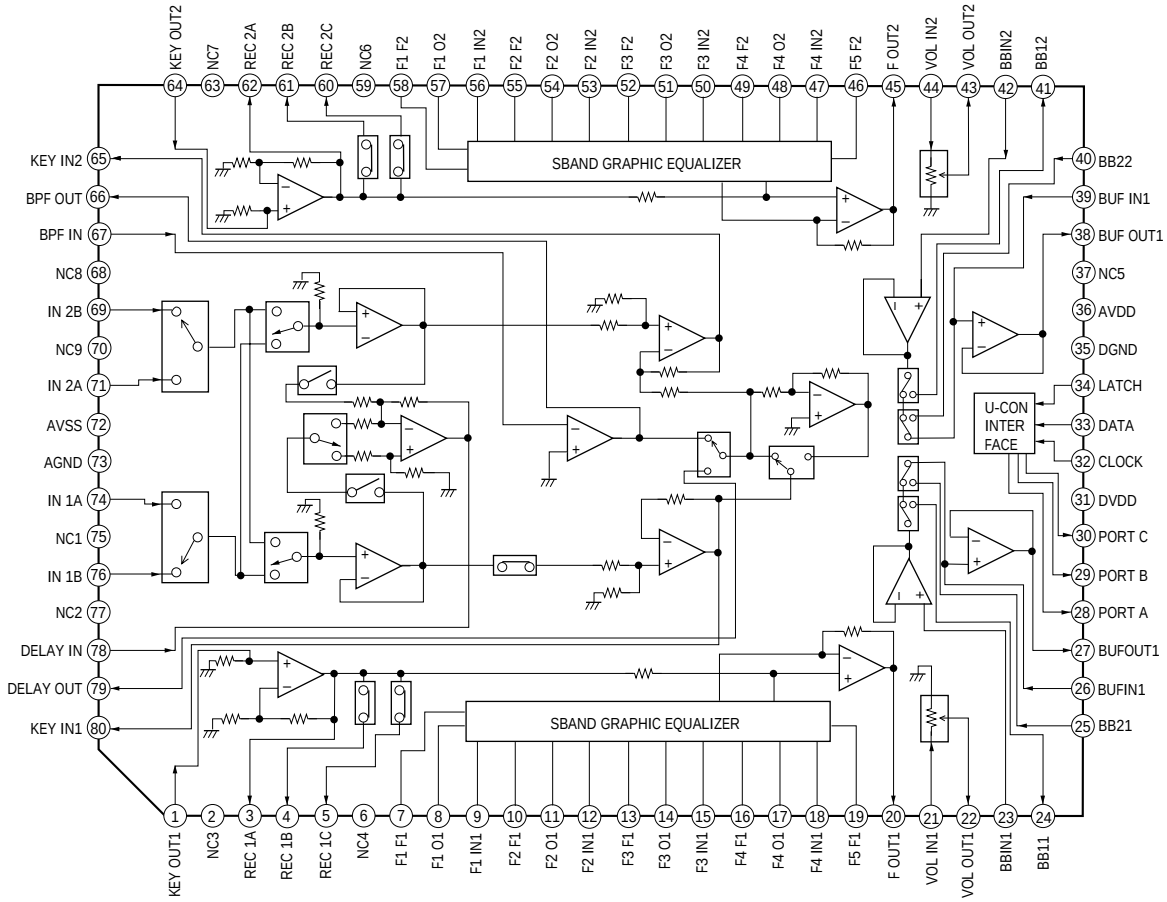


– MAIN SECTION –

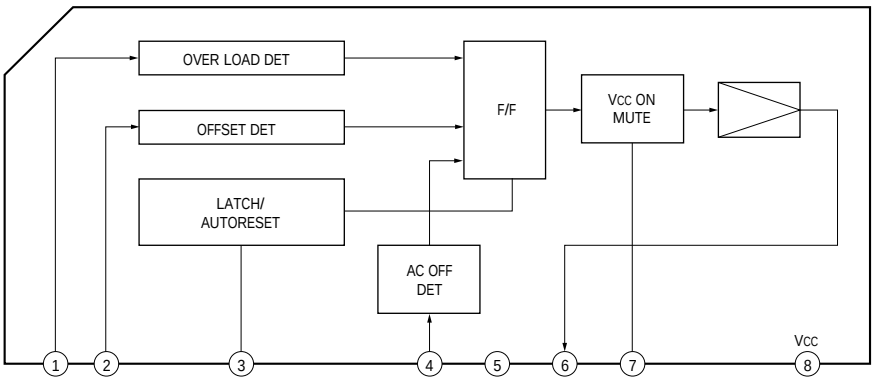
IC102 MC14052BCP



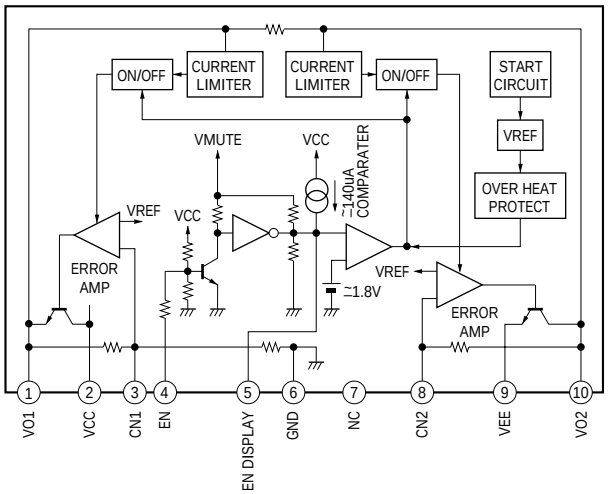
IC201 M62427FP



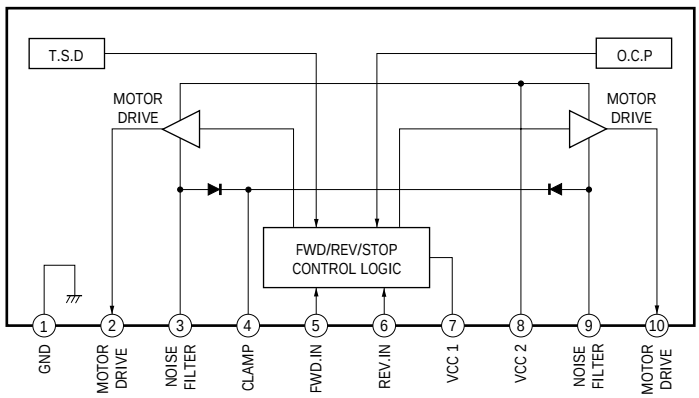
IC281 UPC1237HA



IC901 LA5617

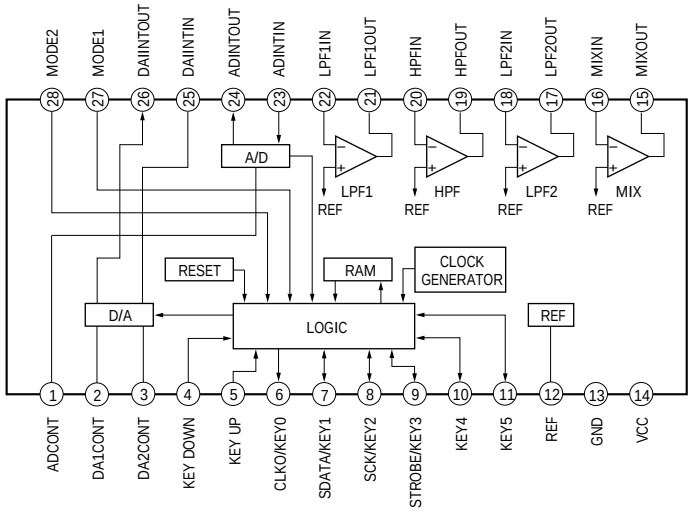


IC1502 LB1641



– KEY-CON SECTION –

IC501 M65847FP-TP



6-28. IC PIN FUNCTION DESCRIPTION

MAIN BOARD IC301 µPD780018Y (MAIN CONTROL)

Pin No.	Pin Name	I/O	Function
1	TA-MUTE	O	Line mute signal output
2	DBFB-H/L	O	DBFB H/L select signal output
3	427-LT	O	Latch signal output for IC201 (62427)
4	KCON-LT	O	Not used
5	KCON-ON/OFF	O	
6	F-RELAY	O	Front speaker relay control output
7	R-RELAY	O	Not used
8	PL-RELAY	O	
9	TEST	I	Connected ground
10	X2	O	X'tal (5MHz)
11	X1	I	
12	VDD	–	Power supply (+5V)
13	XT2	O	X'tal (32.768 KHz)
14	XT1	I	
15	RESET	I	Reset signal input
16	INT/IN	I	Connected ground
17	INT/IN/OUT	I	
18	SCOR	O	Sub code data request signal output
19	SOFT-TEST	O	Software test port
20	AC-CUT	I	Back up signal input
21	RDS-INT	I	RDS signal input
22	RDS-DATA	I	RDS data input
23	VDD	–	Power supply (+5V)
24	AVDD	I	Analog reference voltage input
25	ADJ	I	CD adjust point port
26	A-SHUT	I	A Deck reel pulse detector
27	B-SHUT	I	B Deck reel pulse detector
28	B-HALF	I	Half detector signal input
29	CLK-CHECK	I	Connected ground
30	SPEC-IN	I	Version select signal input
31	ADJ 2	I	Connected ground
32	DEMO-CHANGE	I	DEMO H/L select signal input
33	AVss	–	Ground
34	SQ-DATA-IN	I	Sub code Q data input
35	—	–	Not used
36	SQ-CLK	I	Sub code Q data clock input
37	SW-ON/OFF	O	Not used
38, 39	FUNC 1, 2	I	Connected ground
40	Vss	–	Ground
41	VOL-LAT	O	Not used
42	PL-LAT	O	
43	COM-DIN	I	Connected ground
44	COM-DOUT	O	Common serial data output
45	COM-CLK	O	Common serial clock output
46	CD-POWER	O	CD power on signal output
47	CD-DATA	O	CD data output
48	CD-CLOK	O	CD clock output
49	MSM-CMD	O	Not used
50	MSM-BUSY	I	Connected ground

Pin No.	Pin Name	I/O	Function
51	MSM-LT	O	Not used
52	MSM-NAR	I	
53	MSM-CH	O	
54	INPUT-CHANGE	O	Not used
55	11C-DATA	O	Data output for IC601
56	11C-CLK	O	Clock output for IC601
57	XRST	O	CD reset signal output
58	XLT	O	CD latch signal output
59	FOUCUS-SW	O	Not used
60	TBL-L	O	Table motor control output
61	TBL-R	O	
62	TRAY-LED	O	CD tray LED ON/OFF output
63	LOAD-OUT	O	Not used
64	LOAD-IN	O	
65	ST-CLK	O	Tuner clock output
66	ST-DIN	I	Tuner data input
67	ST-DOUT	O	Tuner data output
68	ST-CE	O	Tuner chip enable output
69	TUNED	I	Tuned detection for tuner
70	STEREO	I	Stereo detection for tuner
71	Vss	–	Ground
72	ST-MUTE	O	Tuner mute signal output
73	SENS2	I	BD Condition signal input
74	SENS	I	
75	DISC-SENS	I	Not used
76	T-SENS	I	CD table detection signal input
77	UP-SW	I	Up SW (S201) signal input
78	ENC 3	I	Not used
79	ENC 2	I	
80	ENC 1	I	
81	OUT-OPEN	I	Not used
82	CAP-M-H/N	O	Capstan motor H/N speed select signal output
83	B-TRG	O	Trigger motor control output
84	A-TRG	O	Trigger motor control output
85	TRG-LOW	O	Trigger motor control output
86	CAP-M-ON/OFF	O	Capstan motor ON/OFF signal output
87	PB-A/B	O	PB Deck A/Deck B select output
88	EQ-H/N	O	Equalizer H/N select output
89	BIAS	O	Bias ON/OFF signal output
90	REC-MUTE	O	REC mute ON/OFF selection output
91	NR-ON/OFF	O	NR ON/OFF signal output
92	R/P-PASS	I	REC/PB/PASS selection output
93	TC-MUTE	O	TC mute ON/OFF selection output
94	A-PLAY-SW	I	Deck A play detect
95	B-PLAY-SW	I	Deck B play detect
96	TC-RELAY	O	REC/PB head selection output for IC602
97	A-HALF	I	Deck A cassette detect
98	POWER	O	POWER ON/OFF signal output
99	SW-F-CHG	O	Super woofer mode signal output
100	STK-MUTE	O	Power amp ON/OFF signal output

PANEL BOARD IC601 TMP87CH74 (DISPLAY CONTROL)

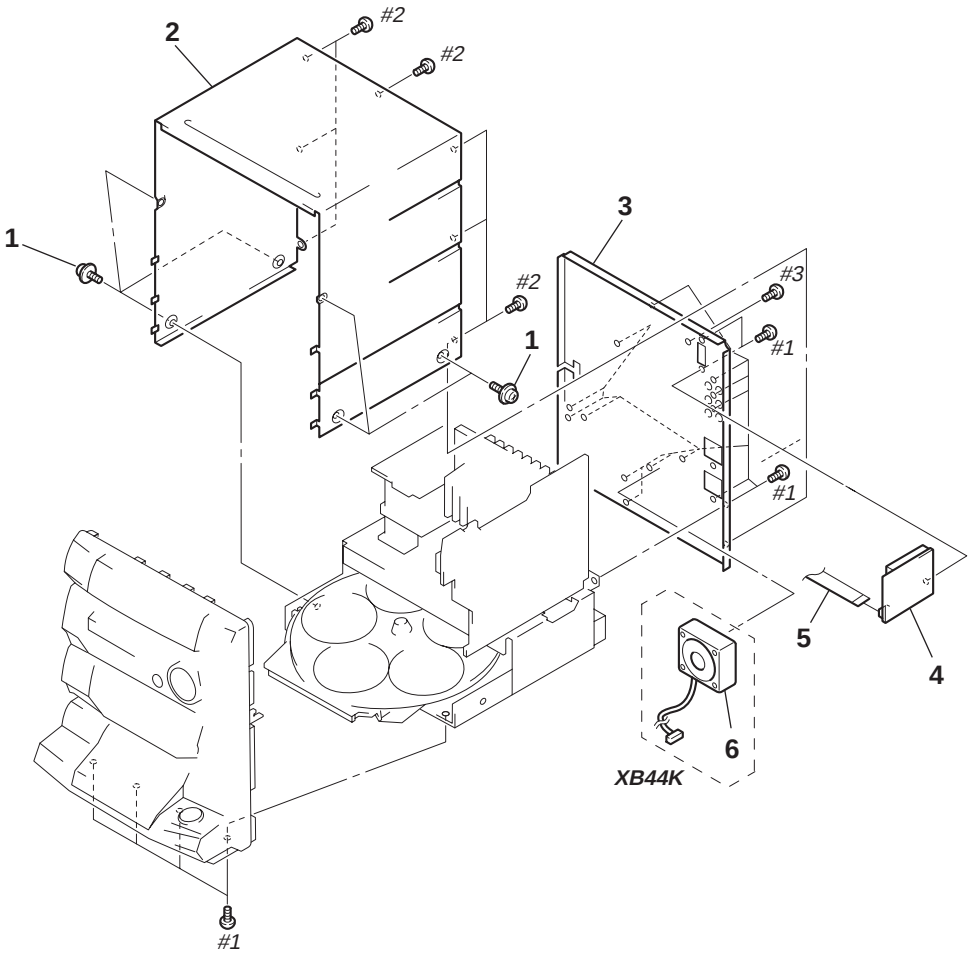
Pin No.	Pin Name	I/O	Function
1–6	LED3-LED8	O	LED driver output
7	VSS	–	Ground
8	X-OUT	O	X'tal (8MHz)
9	X-IN	I	
10	RESET	I	Reset signal input from main controller
11	LED 9	O	Connected ground
12	LED10	O	
13	TEST	I	
14–19	LED11-LED19	O	LED driver output
20	VOL-A	I	Rotary encoder (S701 VOLUME) pulse input
21	DOOR SW	I	SOOR SW (S651) ON/OFF signal input
22	JOG-A	I	Rotaly encoder (S711 AMS) pulse input
23	CLOCK	I	Serial clock input from main controller
24	DATA	I	Serial data input from main controller
25	LED SELECT	O	LED select signal output
26	MODEL	I	Version select signal input
27–30	KEY1-KEY4	I	Key input
31	SPEANA-3	I	Connected ground
32	L + R	I	Spectrum analyzer (high frequency) input
33	SIRCS	I	Remote commander signal input
34	VOL-B	I	Rotary encoder (S701 VOLUME) pulse input
35	JOG-B	I	Rotary encoder (S711 AMS) pulse input
36	SPEANA-1	I	Spectrum analyzer (Low frequency) input
37	SPEANA-2	I	Spectrum analyzer (Middle frequency) input
38	VASS	–	Ground
39	VAREF	I	Analog reference voltage input
40	VDD	–	Power supply (+5V)
41	—	–	Not used
42–56	GR1-GR15	O	FL gride signal output
57–77	SEG1-SEG77	O	FL segment signal output
78	VKK	–	–30V driving power for FL
79, 80	LED1-LED2	O	LED driver output

SECTION 7
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  EA : Saudi Arabia
  SP : Singapore
  MY : Malaysia
  IA : Indonesian
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

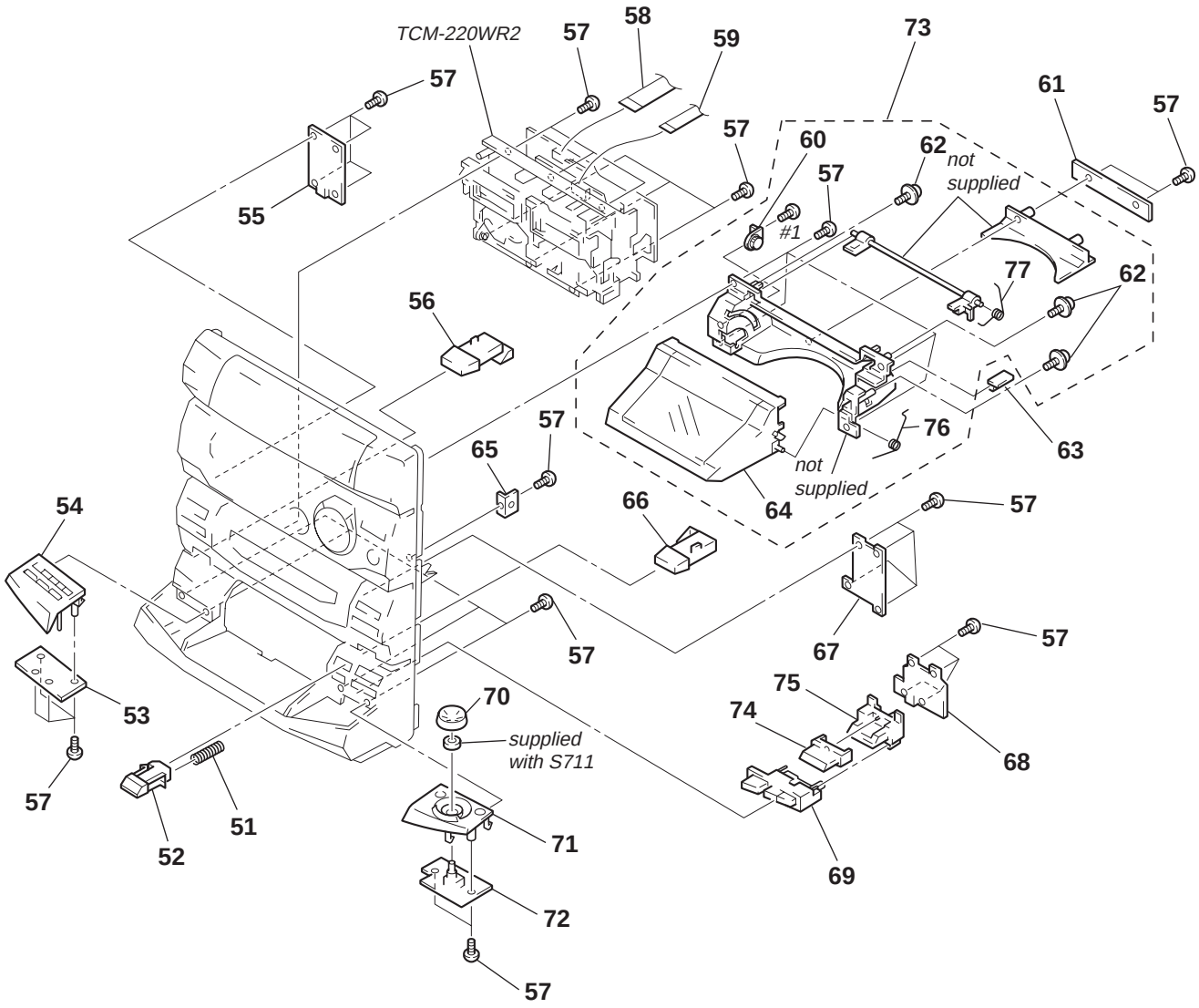
7-1. CASE, REAR PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	3-363-099-01	SCREW (CASE 3 TP2)	
* 2	4-987-052-91	CASE	
* 3	4-996-410-11	PANEL, BACK (XB33K: SP, MY)	
* 3	4-996-410-61	PANEL, BACK (XB33K: E)	
* 3	4-996-410-71	PANEL, BACK (XB33K: EA)	

Ref. No.	Part No.	Description	Remarks
* 3	4-996-412-11	PANEL, BACK (XB44K: SP, MY)	
* 3	4-996-412-61	PANEL, BACK (XB44K: E, IA)	
* 3	4-996-412-71	PANEL, BACK (XB44K: EA)	
4	1-233-545-11	ENCAPSULATED COMPONENT	
5	1-769-974-11	WIRE (FLAT TYPE) (13 CORE)	
6	1-698-792-11	FAN, DC (XB44K)	

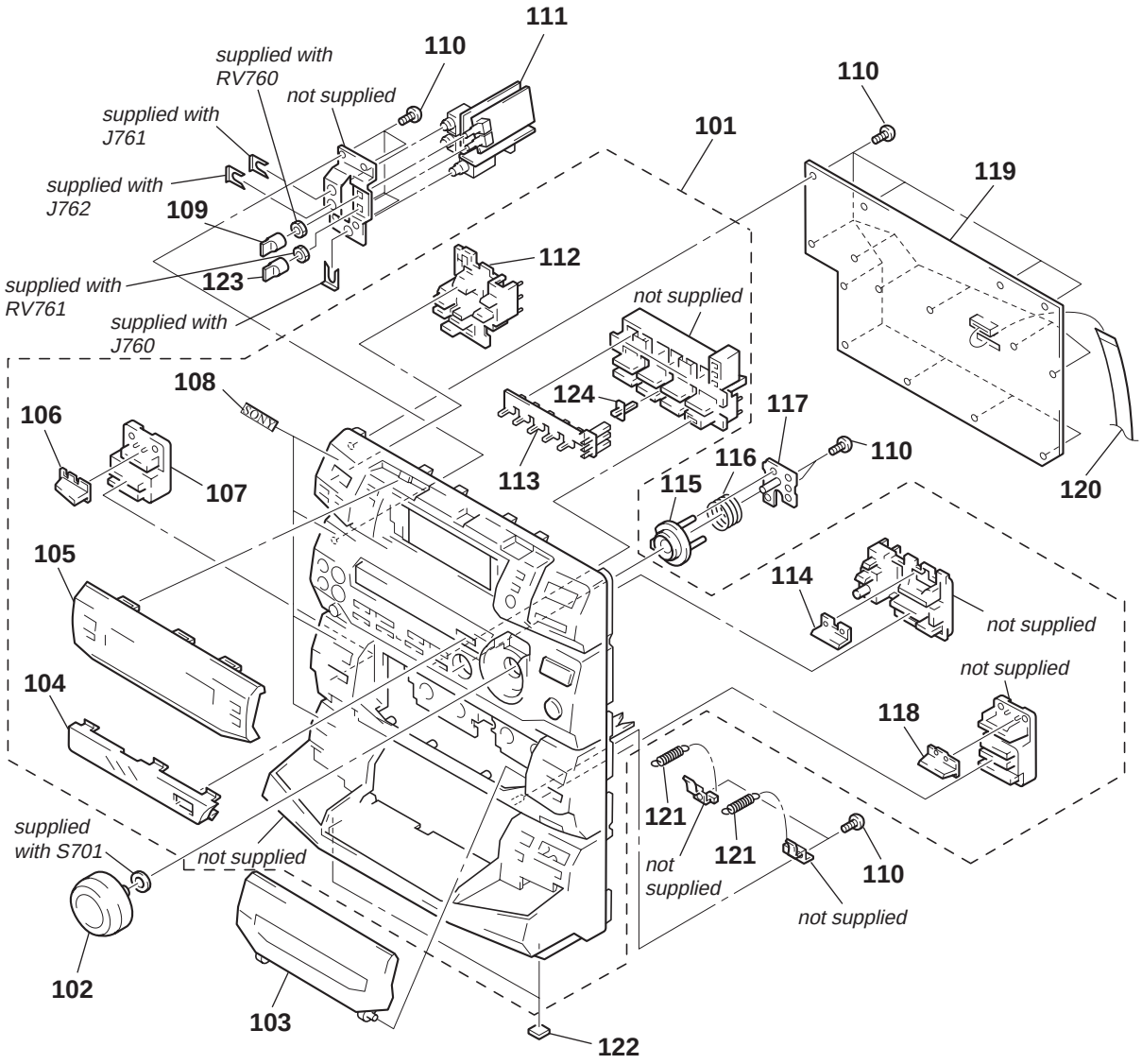
7-2. FRONT PANEL SECTION-1



Ref. No.	Part No.	Description	Remarks
51	4-987-995-01	SPRING (CD EJECT), COMPRESSION	
52	4-987-001-11	BUTTON (EJECT CD)	
* 53	1-669-630-11	CD-A SW BOARD	
54	X-4949-282-1	PANEL(A) SUB ASSY	
* 55	1-664-012-11	TC-A SW BOARD	
56	4-986-999-11	BUTTON (EJECT A)	
57	4-951-620-01	SCREW (2.6 × 8), +BVTP	
58	1-773-161-11	WIRE (FLAT TYPE) (21 CORE)	
59	1-769-949-11	WIRE (FLAT TYPE) (11 CORE)	
60	3-354-963-01	DAMPER	
* 61	1-664-017-11	LED BOARD	
62	4-957-577-01	SCREW PTP WH (2.6 × 8) (DIA. 10)	
* 63	1-664-016-11	DOOR SW BOARD	
64	X-4949-685-1	LID ASSY, DISC	

Ref. No.	Part No.	Description	Remarks
* 65	4-987-933-01	BRACKET (TA)	
66	4-987-000-11	BUTTON (EJECT B)	
* 67	1-664-013-11	TC-B SW BOARD	
* 68	1-669-631-11	CD-B1 SW BOARD	
69	X-4949-279-1	BUTTON (CD STOP) ASSY	
70	4-987-037-11	KNOB (JOG)	
71	X-4949-274-1	PANEL (B) SUB ASSY	
* 72	1-669-632-11	CD-B2 SW BOARD	
73	A-4384-916-A	LID ASSY, CD	
74	4-987-014-01	INDICATOR (CD)	
75	4-987-002-11	BUTTON (CD.PLAY)	
76	4-987-997-01	SPRING (CD.LID), TORSION	
77	4-987-998-01	SPRING (LOCK SHAFT), TORSION	

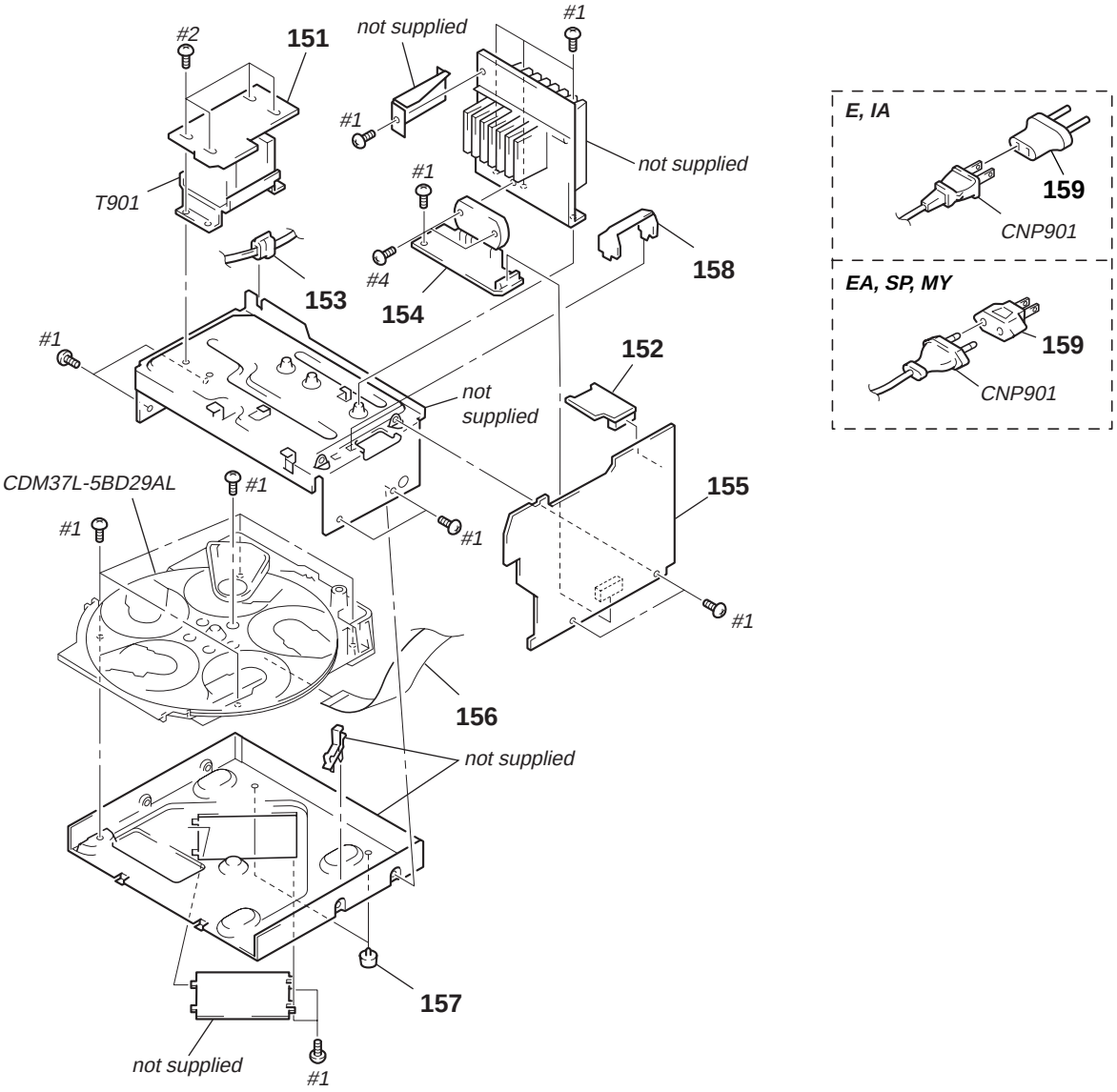
7-3. FRONT PANEL SECTION-2



Ref. No.	Part No.	Description	Remarks
101	X-4949-286-1	PANEL ASSY (XB33K)	
101	X-4949-290-1	PANEL ASSY (XB44K)	
102	4-987-036-11	KNOB (VOL)	
103	X-4949-271-1	LID ASSY, CASSETTE	
104	4-987-032-01	DISPLAY (TA)	
105	4-987-028-11	DISPLAY (ST)	
106	4-987-021-01	INDICATOR (TCA)	
107	4-986-997-41	BUTTON (DECK.A)	
108	4-963-404-21	EMBLEM (5-A), SONY	
109	4-973-644-71	KNOB (MIC)	
110	4-951-620-01	SCREW (2.6X8), +BVTP	
* 111	A-4403-916-A	HEADPHONE-MIC BOARD, COMPLETE	
112	4-986-986-21	BUTTON (POWER)	

Ref. No.	Part No.	Description	Remarks
113	4-987-012-01	INDICATOR (TA)	
114	4-987-013-01	INDICATOR (TUNER)	
115	4-986-990-11	BUTTON (CURSOR)	
116	4-978-683-01	SPRING, COMPRESSION	
* 117	4-987-041-01	COVER, CURSOR	
118	4-987-022-01	INDICATOR (TCB)	
* 119	A-4403-835-A	PANEL BOARD, COMPLETE (XB44K)	
* 119	A-4403-917-A	PANEL BOARD, COMPLETE (XB33K)	
120	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)	
121	4-987-996-01	SPRING (TC LID), TENSION	
122	4-948-236-21	CUSHION (107)	
123	4-973-644-71	KNOB (ECHO)	
124	4-987-017-01	INDICATOR (KEY CONTROL)	

7-4. CHASSIS SECTION

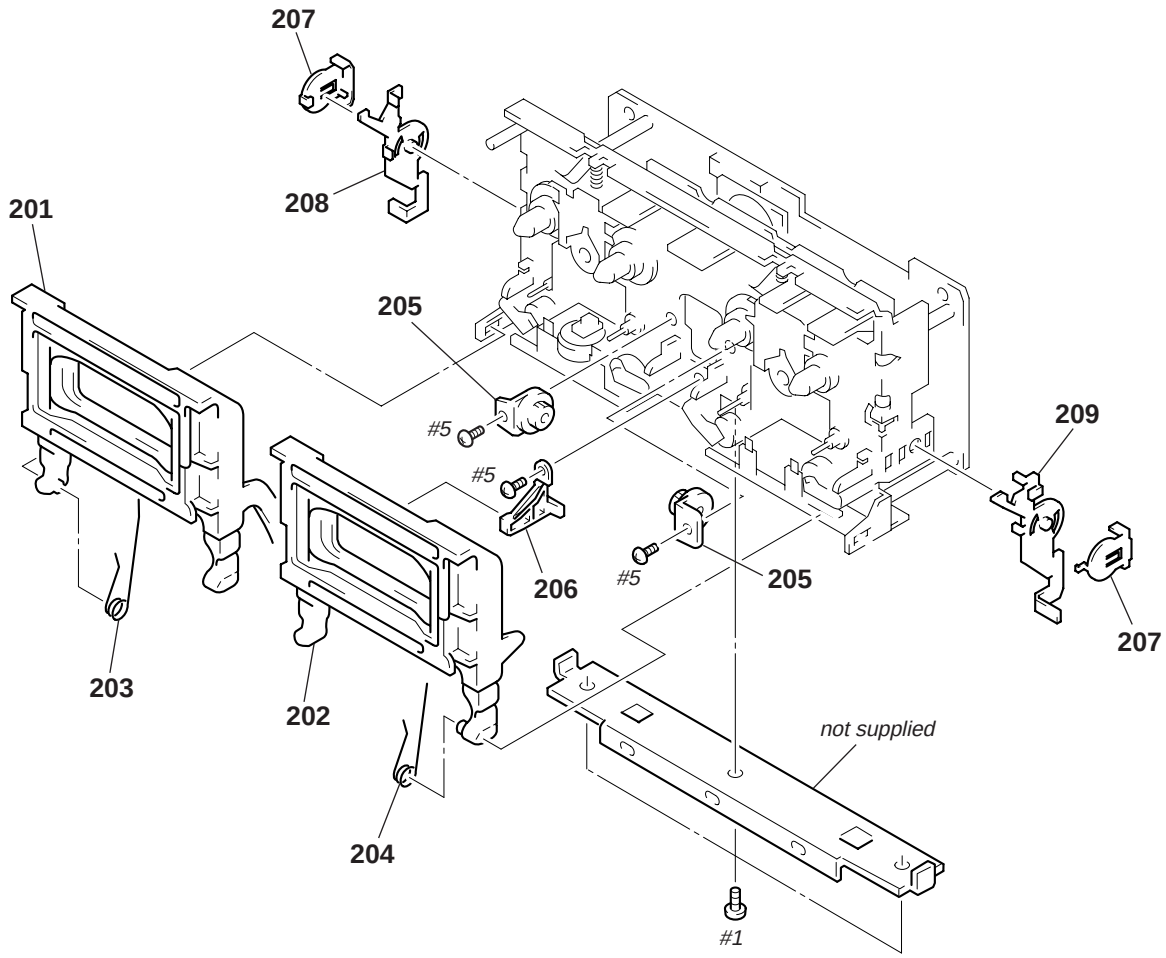


Ref. No.	Part No.	Description	Remarks
* 151	1-668-169-11	TRANS BOARD	
* 152	A-4403-922-A	KEY-CON BOARD, COMPLETE	
153	3-703-244-00	BUSHING (FBS001), CORD (EA, SP, MY)	
153	4-966-266-01	BUSHING (S)(FBS002), CORD (E, IA)	
* 154	A-4403-888-A	POWER AMP BPARD, COMPLETE (XB44K)	
* 154	A-4403-912-A	POWER AMP BPARD,COMPLETE (XB33K)	
* 155	A-4403-832-A	MAIN BOARD, COMPLETE (XB44K)	
* 155	A-4403-919-A	MAIN BOARD, COMPLETE (XB33K)	

Ref. No.	Part No.	Description	Remarks
156	1-777-868-11	WIRE (FLAT TYPE) (19 CORE)	
157	X-4941-228-1	FOOT (F22125H-M)	
* 158	4-988-533-01	HOLDER, PWB	
⚠159	1-569-007-11	ADAPTOR, CONVERSION 2P (E, IA)	
⚠159	1-569-008-11	ADAPTOR, CONVERSION 2P (EA, SP, MY)	
⚠CNP901	1-558-943-51	CORD, POWER (E, IA)	
⚠CNP901	1-575-651-21	CORD, POWER (EA, SP, MY)	
⚠T901	1-431-635-11	TRANSFORMER, POWER (XB33K)	
⚠T901	1-431-637-11	TRANSFORMER, POWER (XB44K)	

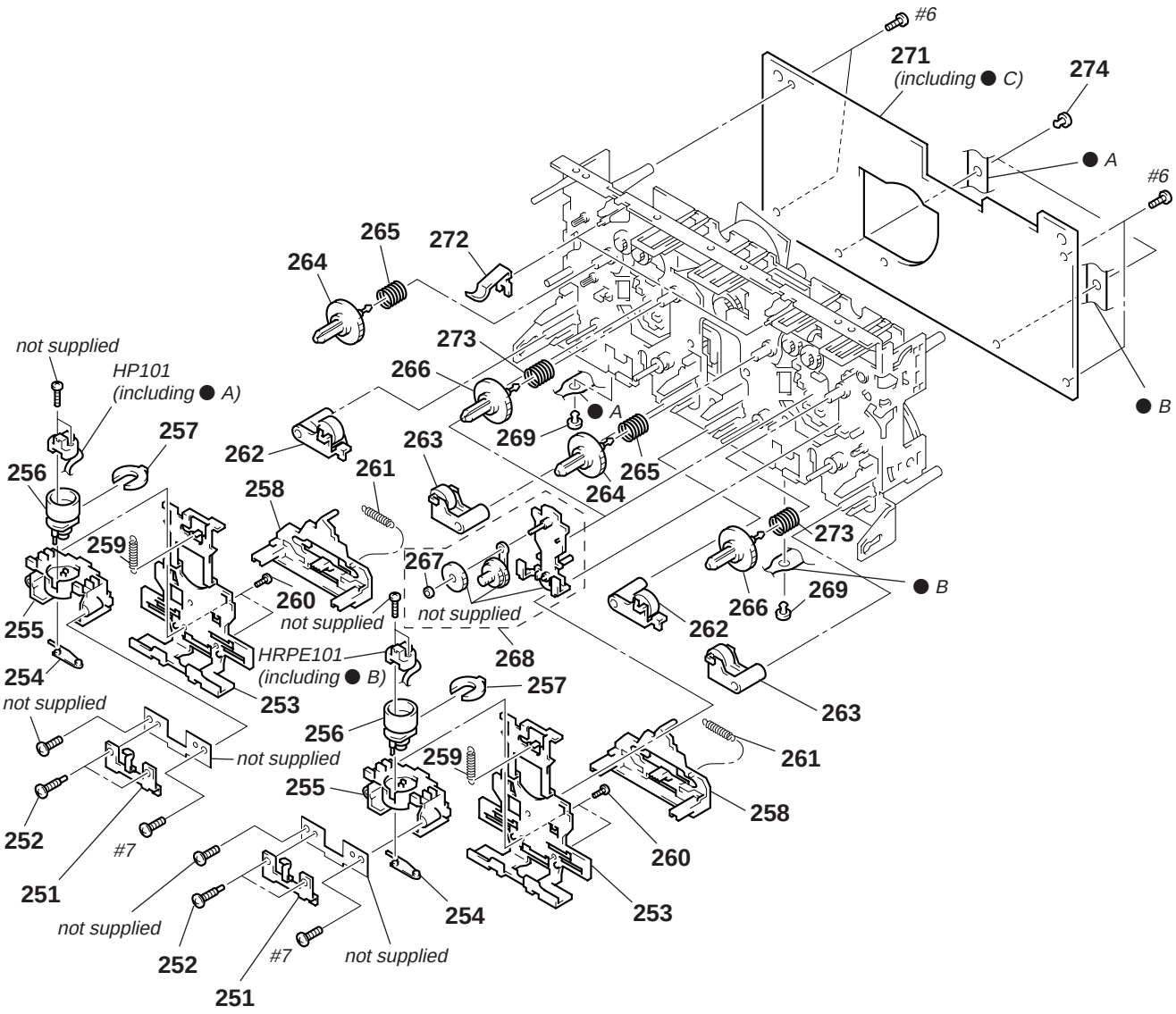
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-5. TAPE MECHANISM DECK SECTION-1 (TCM-220WR2)



Ref. No.	Part No.	Description	Remarks
201	X-4947-943-1	HOLDER (L) ASSY, CASSETTE	
202	X-4947-944-1	HOLDER (R) ASSY, CASSETTE	
203	4-959-231-11	SPRING (L), TORSION	
204	4-959-232-11	SPRING (R), TORSION	
205	3-354-963-01	DAMPER	
* 206	4-980-439-01	FULCRUM, HOLDER	
207	3-354-957-01	JOINT (LOCK LEVER)	
208	3-354-953-01	LEVER (LOCK LEVER L)	
209	3-354-954-01	LEVER (LOCK LEVER R)	

7-6. TAPE MECHANISM DECK SECTION-2 (TCM-220WR2)

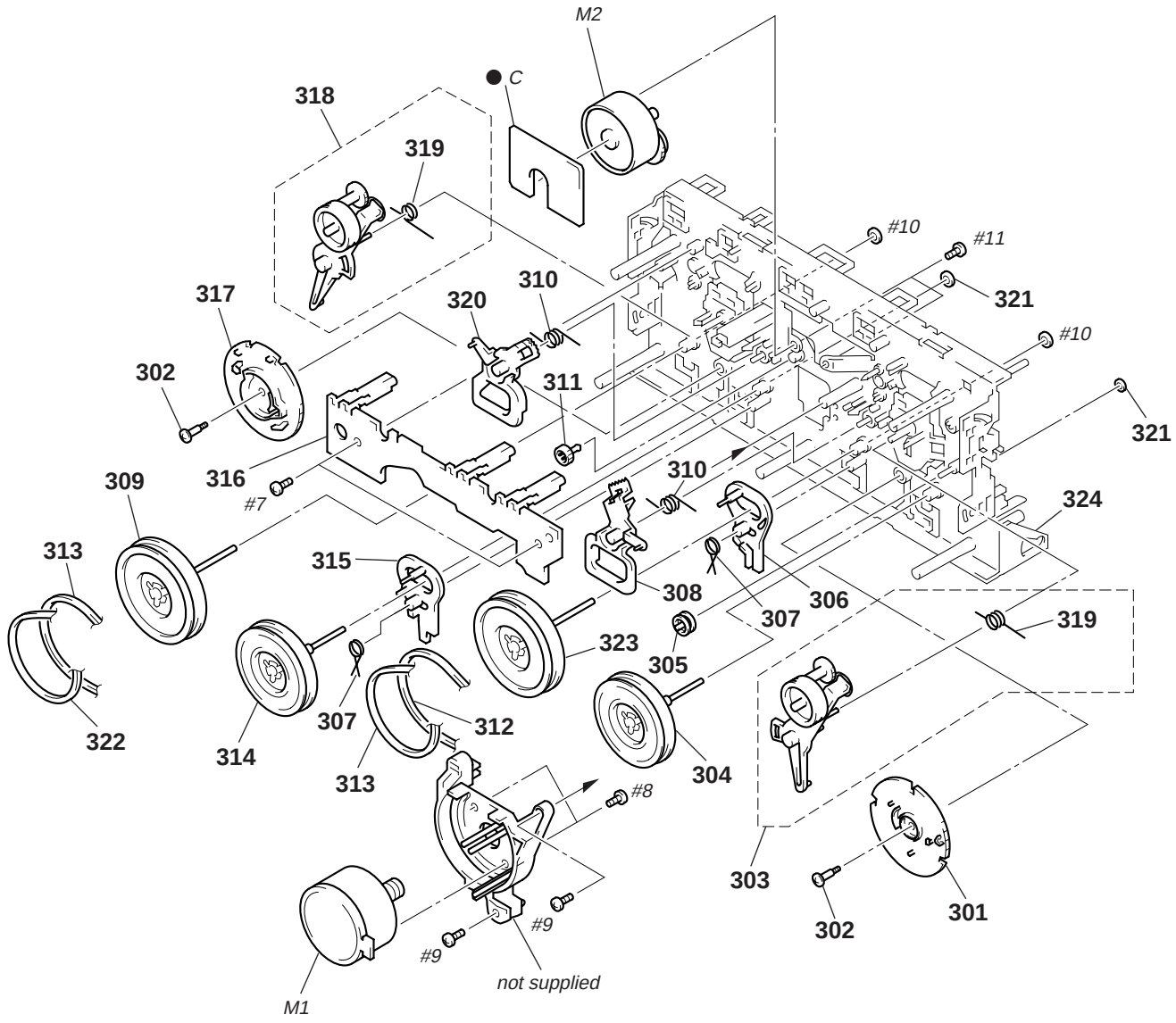


Ref. No.	Part No.	Description	Remarks
251	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT	
252	3-919-684-01	SCREW, AZIMUTH ADJUSTMENT	
253	X-3373-113-1	SLIDER (HEAD) ASSY	
254	3-908-556-01	SPRING, HEAD TOGGLE	
255	3-908-558-02	FITTING BLOCK, HEAD	
256	3-908-557-02	ROTARY BLOCK, HEAD	
* 257	3-908-559-01	STOPPER, AZIMUTH	
258	3-908-555-01	SLIDER (REV SLIDER)	
259	3-917-143-11	SPRING, TENSION	
260	3-388-848-01	SCREW (P2 ×6) (B TIGHT)	
261	3-939-371-01	SPRING (1), TENSION	
262	X-3369-909-1	PINCH LEVER (REV) ASSY	
263	X-3369-908-1	PINCH LEVER (FWD) ASSY	

Ref. No.	Part No.	Description	Remarks
264	3-908-613-01	GEAR (S), REEL	
265	3-917-141-01	SPRING, COMPRESSION	
266	X-3371-305-1	REEL (T) ASSY	
267	3-669-465-01	WASHER (1.5), STOPPER	
268	X-3370-173-1	TU ASSY	
269	3-911-116-21	RIVET, PUSH	
* 271	A-2007-131-A	AUDIO BOARD, COMPLETE	
272	3-930-972-01	DETENT, HALF	
273	3-917-142-01	SPRING, COMPRESSION	
274	3-911-116-11	RIVET, PUSH	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK A)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK B)	

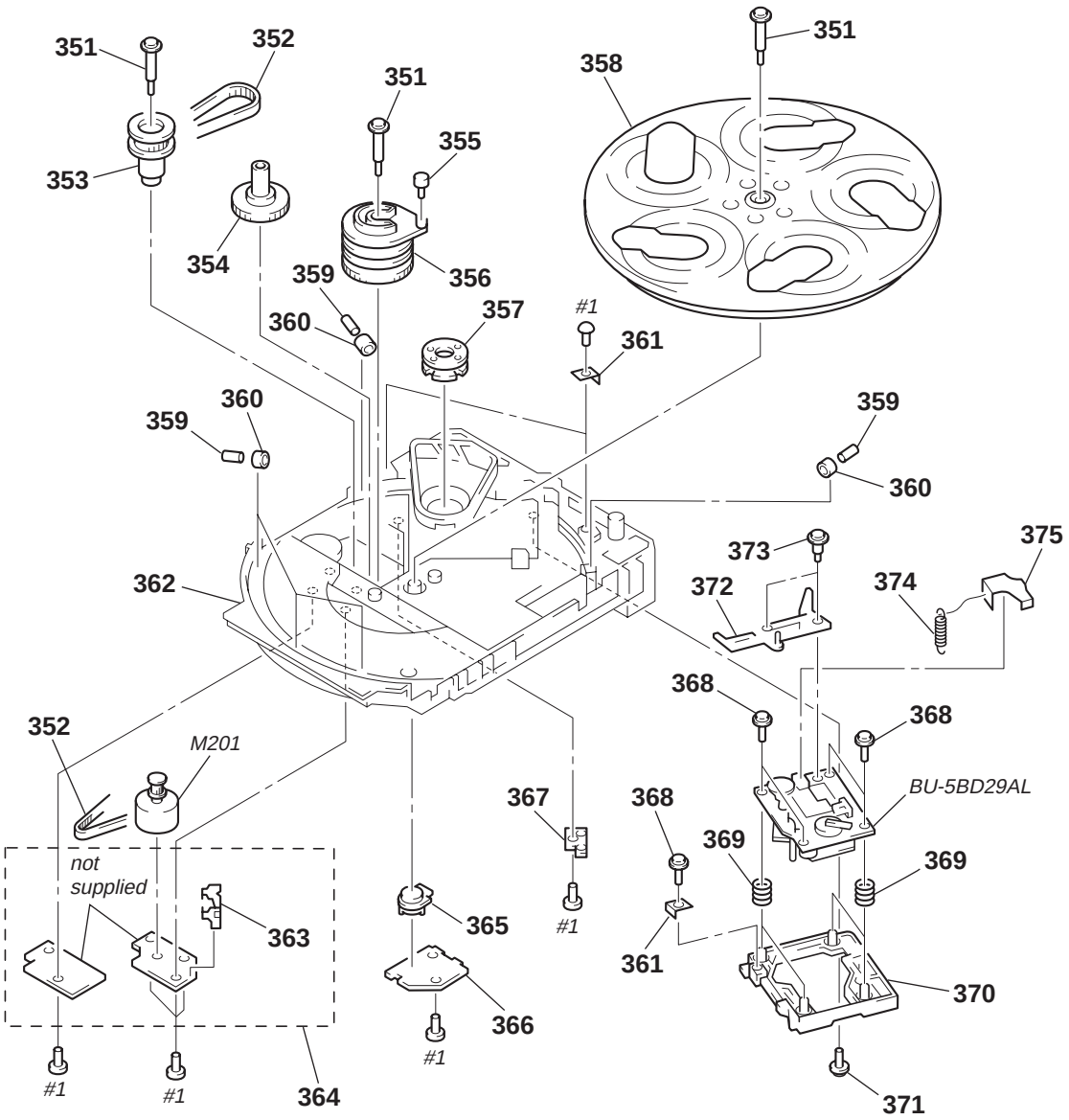
7-7. TAPE MECHANISM DECK SECTION-3
(TCM-220WR2)

● C : MOTOR board (supplied with AUDIO board)



Ref. No.	Part No.	Description	Remarks
301	3-908-597-01	CAM (A)	
302	3-908-608-11	SCREW, STEP	
303	X-3372-930-1	ARM (A) ASSY, FR	
304	X-3370-169-1	FLYWHEEL (AR) ASSY	
305	3-928-047-01	PULLEY, TENSION	
306	3-908-599-01	LEVER (REV-A)	
307	3-908-601-01	SPRING (REV LEVER), TORSION	
308	3-908-603-01	LEVER (TRIGGER A)	
309	X-3367-593-1	FLYWHEEL (BF) ASSY	
310	3-908-605-01	SPRING (TRIGGER), TORSION	
311	3-908-609-01	GEAR, TRIGGER	
312	3-913-845-11	BELT (A)	
313	3-913-846-11	BELT (FR)	
314	X-3370-171-1	FLYWHEEL (BR) ASSY	
315	3-908-600-01	LEVER (REV-B)	
* 316	1-650-669-11	LEAF SWITCH BOARD	
317	3-908-598-01	CAM (B)	
318	X-3372-931-1	ARM (B) ASSY, FR	
319	3-914-111-01	SPRING (FR), TORSION	
320	3-908-604-01	LEVER (TRIGGER B)	
321	3-911-115-01	WASHER, STOPPER	
322	3-917-176-11	BELT (B)	
323	X-3370-172-1	FLYWHEEL (AF) ASSY	
324	X-3371-441-1	CHASSIS ASSY, MECHANICAL	
M1	X-3371-223-1	MOTOR ASSY, CAPSTAN	
M2	A-2004-410-A	MOTOR ASSY, DC (TRIGGER)	

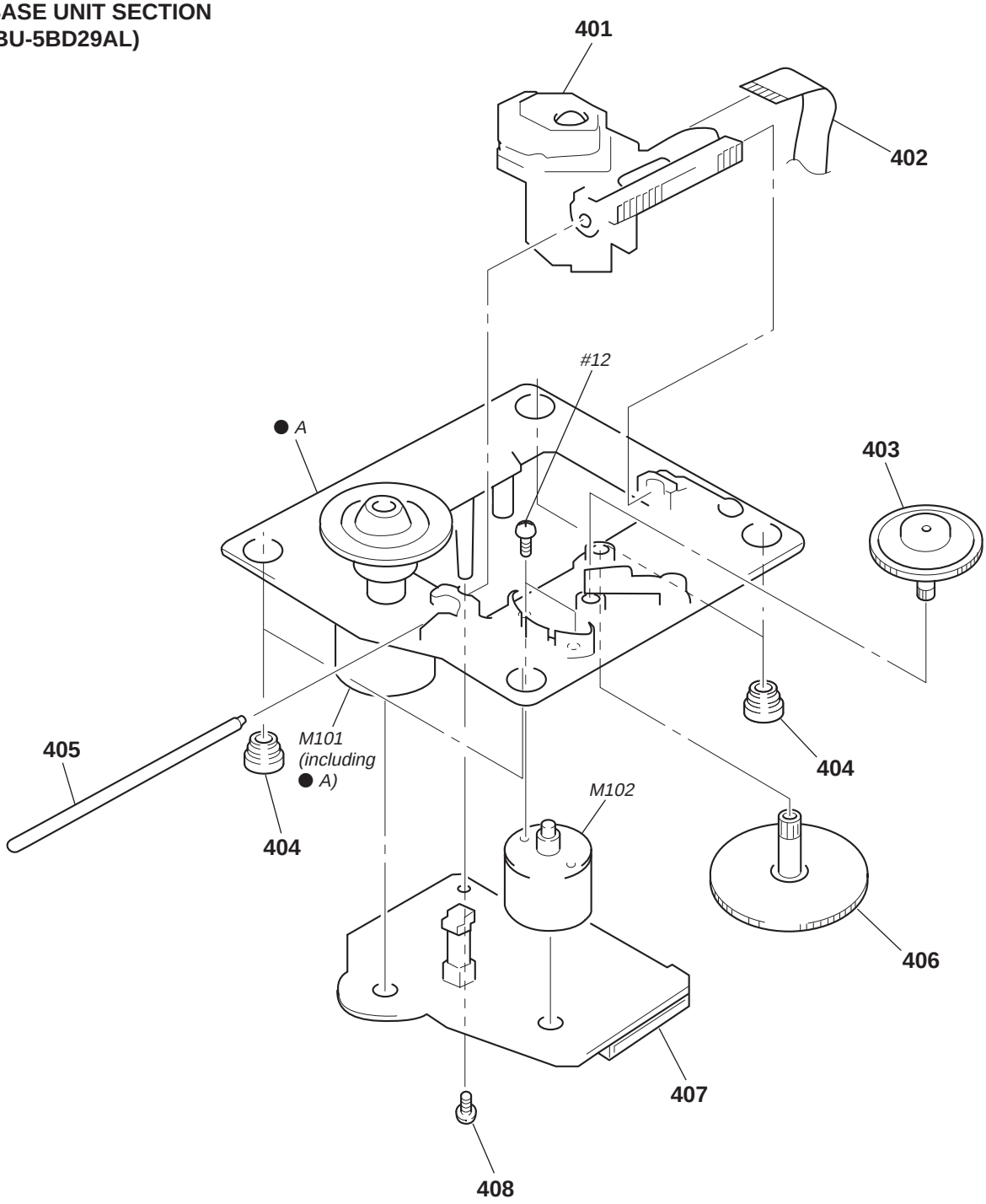
7-8. CD MECHANISM DECK SECTION (CDM37L-5BD29AL)



Ref. No.	Part No.	Description	Remarks
351	4-987-976-01	SCREW, STEP	
352	4-944-490-01	BELT (TIMING)	
353	A-4660-978-A	GEAR (PULLEY) ASSY	
354	4-978-421-01	GEAR (MID)	
355	4-978-425-01	ROLLER (CAM)	
356	4-978-420-01	CAM (HOLDER)	
357	1-452-538-11	MAGNET	
358	4-978-417-01	TABLE, DISC	
359	4-934-376-01	SHAFT (ROLLER)	
360	X-4924-457-1	ROLLER ASSY	
* 361	4-978-583-01	BRACKET (BU)	
* 362	4-978-418-01	CHASSIS	
* 363	4-980-385-01	HOLDER (SW)	

Ref. No.	Part No.	Description	Remarks
* 364	A-4673-765-A	CD MOTOR BOARD, COMPLETE	
365	4-978-426-01	INDICATOR (NO.)	
* 366	1-659-059-13	BD LED BOARD	
* 367	1-659-058-13	TABLE SENSOR BOARD	
368	4-933-134-01	SCREW (+PTPWH M2.6 × 6)	
369	4-958-593-01	SPRING (BU), COMPRESSION	
* 370	4-978-419-01	HOLDER (BU–5)	
371	4-917-583-71	BRACKET, YOKE	
372	4-989-493-01	SLIDER (37)	
373	4-989-494-01	SCREW (SLIDER), STEP	
374	4-989-819-01	SPRING, TENSION	
375	4-989-491-21	COVER, LENS	
M201	A-4660-977-A	MOTOR ASSY (TABLE)	

7-9. BASE UNIT SECTION (BU-5BD29AL)



Ref. No.	Part No.	Description	Remarks
⚠401	8-820-020-01	OPTICAL PICK-UP KSS-213D/Q-NP	
402	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
403	4-917-567-21	GEAR (M)	
404	4-951-940-01	INSULATOR (BU)	
405	4-917-565-01	SHAFT, SLED	
406	4-917-564-01	GEAR (P), FLATNESS	
* 407	A-4699-522-A	BD BOARD, COMPLETE	
408	4-951-620-01	SCREW (2.6 × 8), +BVTP	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

AUDIO

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- Abbreviation
  EA : Saudi Arabia MY : Malaysia
  SP : Singapore IA : Indonesian

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF

- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

Ref. No.	Part No.	Description			Remarks
*	A-2007-131-A	AUDIO BOARD, COMPLETE			
		**********			
		(including MOTOR BOARD)			
		< CAPACITOR >			
C301	1-162-289-31	CERAMIC	390PF	10%	50V
C302	1-126-968-11	ELECT	100uF	20%	6.3V
C303	1-162-282-31	CERAMIC	100PF	10%	50V
C304	1-130-483-00	MYLAR	0.01uF	5%	50V
C305	1-107-715-11	ELECT	22uF	20%	16V
C311	1-162-289-31	CERAMIC	390PF	10%	50V
C313	1-162-282-31	CERAMIC	100PF	10%	50V
C314	1-130-487-00	MYLAR	0.022uF	5%	50V
C315	1-126-233-11	ELECT	22uF	20%	25V
C331	1-137-427-11	FILM	120PF	5%	50V
C332	1-162-288-31	CERAMIC	330PF	10%	50V
C333	1-162-209-31	CERAMIC	27PF	5%	50V
C401	1-162-289-31	CERAMIC	390PF	10%	50V
C402	1-126-968-11	ELECT	100uF	20%	6.3V
C403	1-162-282-31	CERAMIC	100PF	10%	50V
C404	1-130-483-00	MYLAR	0.01uF	5%	50V
C405	1-107-715-11	ELECT	22uF	20%	16V
C411	1-162-289-31	CERAMIC	390PF	10%	50V
C413	1-162-282-31	CERAMIC	100PF	10%	50V
C414	1-130-487-00	MYLAR	0.022uF	5%	50V
C415	1-126-233-11	ELECT	22uF	20%	25V
C431	1-137-427-11	FILM	120PF	5%	50V
C432	1-162-288-31	CERAMIC	330PF	10%	50V
C433	1-162-209-31	CERAMIC	27PF	5%	50V
C601	1-104-396-11	ELECT	10uF	20%	16V
C602	1-104-396-11	ELECT	10uF	20%	16V
C611	1-124-907-11	ELECT	10uF	20%	50V
C612	1-124-907-11	ELECT	10uF	20%	50V
C621	1-137-150-11	FILM	0.01uF	5%	100V
C622	1-126-961-11	ELECT	2.2uF	20%	50V
C623	1-136-155-00	FILM	0.015uF	5%	50V
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V
C627	1-124-903-11	ELECT	1uF	20%	50V
C628	1-136-153-00	FILM	0.01uF	5%	50V
C642	1-104-664-11	ELECT	47uF	20%	16V
C651	1-161-494-00	CERAMIC	0.022uF		25V

Ref. No.	Part No.	Description			Remarks
		< CONNECTOR >			
CN601	1-695-382-31	PIN, CONNECTOR (PC BOARD) 21P			
CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			
* CN651	1-564-521-11	PLUG, CONNECTOR 6P			
		< IC >			
IC601	8-759-111-44	IC uPC4570C-1			
IC602	8-759-143-54	IC uPC1330HA			
IC611	8-759-111-44	IC uPC4570C-1			
		< COIL >			
L331	1-410-780-11	INDUCTOR 27mH			
L431	1-410-780-11	INDUCTOR 27mH			
		< TRANSISTOR >			
Q621	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q622	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q623	8-729-801-93	TRANSISTOR 2SD1387			
Q651	8-729-900-65	TRANSISTOR DTA144ES			
		< RESISTOR >			
R301	1-247-881-00	CARBON	120K	5%	1/4W
R302	1-249-409-11	CARBON	220	5%	1/4W
R303	1-249-433-11	CARBON	22K	5%	1/4W
R304	1-247-889-00	CARBON	270K	5%	1/4W
R305	1-247-858-11	CARBON	13K	5%	1/4W
R311	1-247-881-00	CARBON	120K	5%	1/4W
R312	1-247-807-31	CARBON	100	5%	1/4W
R314	1-247-882-11	CARBON	130K	5%	1/4W
R315	1-247-850-11	CARBON	6.2K	5%	1/4W
R331	1-249-430-11	CARBON	12K	5%	1/4W
R401	1-247-881-00	CARBON	120K	5%	1/4W
R402	1-249-409-11	CARBON	220	5%	1/4W
R403	1-249-433-11	CARBON	22K	5%	1/4W
R404	1-247-889-00	CARBON	270K	5%	1/4W
R405	1-247-858-11	CARBON	13K	5%	1/4W
R411	1-247-881-00	CARBON	120K	5%	1/4W
R412	1-247-807-31	CARBON	100	5%	1/4W
R414	1-247-882-11	CARBON	130K	5%	1/4W
R415	1-247-850-11	CARBON	6.2K	5%	1/4W
R431	1-249-430-11	CARBON	12K	5%	1/4W
R601	1-249-409-11	CARBON	220	5%	1/4W
R602	1-249-409-11	CARBON	220	5%	1/4W
R608	1-249-409-11	CARBON	220	5%	1/4W
R609	1-249-433-11	CARBON	22K	5%	1/4W
R611	1-249-409-11	CARBON	220	5%	1/4W

Ref. No.	Part No.	Description			Remarks
R612	1-249-409-11	CARBON	220	5%	1/4W
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W
R651	1-247-856-00	CARBON	11K	5%	1/4W
R652	1-247-856-00	CARBON	11K	5%	1/4W
R653	1-249-441-11	CARBON	100K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV341	1-238-551-11	RES, ADJ, CARBON 220K			
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV441	1-238-551-11	RES, ADJ, CARBON 220K			
RV651	1-238-599-11	RES, ADJ, CARBON 4.7K			
RV652	1-238-599-11	RES, ADJ, CARBON 4.7K			
		< TRANSFORMER >			
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			
**********					
*	A-4699-522-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V
C102	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C107	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C112	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C113	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C114	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C117	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C118	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C119	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C120	1-124-779-00	ELECT CHIP	10uF	20%	16V
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V
C125	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C126	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C127	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C131	1-164-346-11	CERAMIC CHIP	1uF		16V

Ref. No.	Part No.	Description			Remarks
C140	1-110-501-11	CERAMIC CHIP	0.33uF		50V
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C161	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C162	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C163	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C164	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C165	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C166	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C167	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C168	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C169	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C170	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C171	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C173	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C175	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C176	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C177	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C178	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C179	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C181	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C182	1-126-393-11	ELECT	33uF	20%	10V
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C185	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C188	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C189	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P			
CNU102	1-778-874-11	CONNECTOR, FFC (LIF (NON-ZIF)) 19P			
		< FERRITE BEAD >			
FB101	1-414-234-11	INDUCTOR, FERRITE BEAD			
FB103	1-414-234-11	INDUCTOR, FERRITE BEAD			
		< IC >			
IC101	8-752-080-62	IC CXA1992AR			
IC102	8-759-429-32	IC BA5941FP-E2			
IC103	8-752-378-66	IC CXD2519Q			
		< JUMPER RESISTOR >			
JW101	1-216-295-91	CONDUCTOR, CHIP (2012)			
JW104	1-216-295-91	CONDUCTOR, CHIP (2012)			
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR MSB710-R			
		< RESISTOR >			
R102	1-216-001-00	METAL CHIP	10	5%	1/10W
R104	1-216-093-00	METAL CHIP	68K	5%	1/10W
R105	1-216-088-00	METAL CHIP	43K	5%	1/10W
R106	1-216-088-00	METAL CHIP	43K	5%	1/10W
R107	1-216-088-00	METAL CHIP	43K	5%	1/10W

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

BD **BD LED** **CD MOTOR**

Ref. No.	Part No.	Description			Remarks
R108	1-216-088-00	METAL CHIP	43K	5%	1/10W
R109	1-216-093-00	METAL CHIP	68K	5%	1/10W
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R117	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R118	1-216-063-91	METAL CHIP	3.9K	5%	1/10W
R119	1-216-085-00	METAL CHIP	33K	5%	1/10W
R120	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R121	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R122	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W
R124	1-216-091-00	METAL CHIP	56K	5%	1/10W
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R126	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R127	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R128	1-216-098-00	METAL CHIP	110K	5%	1/10W
R129	1-216-025-91	METAL GLAZE	100	5%	1/10W
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W
R131	1-216-079-00	METAL CHIP	18K	5%	1/10W
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R134	1-216-065-91	METAL CHIP	4.7K	5%	1/10W
R135	1-216-065-91	METAL CHIP	4.7K	5%	1/10W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W
R137	1-216-065-91	METAL CHIP	4.7K	5%	1/10W
R138	1-216-025-91	METAL GLAZE	100	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R158	1-216-001-00	METAL CHIP	10	5%	1/10W
R159	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R161	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W
R163	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R164	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R165	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R166	1-216-073-00	METAL CHIP	10K	5%	1/10W
R167	1-216-081-00	METAL CHIP	22K	5%	1/10W
R168	1-216-073-00	METAL CHIP	10K	5%	1/10W
R169	1-216-079-00	METAL CHIP	18K	5%	1/10W
R170	1-216-081-00	METAL CHIP	22K	5%	1/10W
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
R172	1-216-079-00	METAL CHIP	18K	5%	1/10W
R173	1-216-025-91	METAL GLAZE	100	5%	1/10W
R174	1-216-033-00	METAL CHIP	220	5%	1/10W
R175	1-216-025-91	METAL GLAZE	100	5%	1/10W
R176	1-216-025-91	METAL GLAZE	100	5%	1/10W
R177	1-216-025-91	METAL GLAZE	100	5%	1/10W
R178	1-216-025-91	METAL GLAZE	100	5%	1/10W
R179	1-216-025-91	METAL GLAZE	100	5%	1/10W
R180	1-216-025-91	METAL GLAZE	100	5%	1/10W
R181	1-216-025-91	METAL GLAZE	100	5%	1/10W
R188	1-216-037-00	METAL CHIP	330	5%	1/10W
R190	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R191	1-216-105-91	METAL GLAZE	220K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF			
		< VIBRATOR >			
X101	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)			
**********					
*	1-659-059-13	BD LED BOARD			
		**********			
		< DIODE >			
D201	8-719-032-98	DIODE SEL5820A			
		< TRANSISTOR >			
Q201	8-729-119-78	TRANSISTOR 2SC403SP-51			
		< RESISTOR >			
R201	1-247-863-91	CARBON	22K	5%	1/4W
R202	1-249-411-11	CARBON	330	5%	1/4W
R203	1-249-437-11	CARBON	47K	5%	1/4W
**********					
*	A-4673-765-A	CD MOTOR BOARD, COMPLETE			
		**********			
*	4-980-385-01	HOLDER (SW)			
		< CAPACITOR >			
C201	1-124-907-11	ELECT	10uF	20%	50V
C202	1-164-159-21	CERAMIC	0.1uF		50V
C203	1-124-907-11	ELECT	10uF	20%	50V
		< CONNECTOR >			
* CN201	1-568-947-11	PIN, CONNECTOR 9P			
		< IC >			
IC201	8-759-365-94	IC TA8409S			
		< COIL >			
L201	1-408-117-00	INDUCTOR 10uH			
		< RESISTOR >			
R205	1-249-427-11	CARBON	6.8K	5%	1/4W
R206	1-249-425-11	CARBON	4.7K	5%	1/4W
		< SWITCH >			
S201	1-762-587-11	SWITCH, PUSH (1 KEY)			
**********					

CD-A SW | CD-B1 SW | CD-B2 SW | DOOR SW | HEADPHONE-MIC

Ref. No.	Part No.	Description				Remarks
*	1-669-630-11	CD-A SW BOARD				
		**********				
		< DIODE >				
D641	8-719-058-04	DIODE SEL5223S-TP15 (NON-STOP)				
		< RESISTOR >				
R731	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R732	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R733	1-249-429-11	CARBON	10K	5%	1/4W	
R734	1-249-432-11	CARBON	18K	5%	1/4W	
R735	1-249-436-11	CARBON	39K	5%	1/4W	
R736	1-247-881-00	CARBON	120K	5%	1/4W	
R737	1-247-881-00	CARBON	120K	5%	1/4W	
R741	1-247-807-31	CARBON	100	5%	1/4W	
		< SWITCH >				
S661	1-554-303-21	SWITCH, TACTILE (DISC 1)				
S662	1-554-303-21	SWITCH, TACTILE (DISC 2)				
S663	1-554-303-21	SWITCH, TACTILE (DISC 3)				
S664	1-554-303-21	SWITCH, TACTILE (DISC 4)				
S665	1-554-303-21	SWITCH, TACTILE (DISC 5)				
S666	1-554-303-21	SWITCH, TACTILE (FLASH)				
S667	1-554-303-21	SWITCH, TACTILE (NON-STOP)				
S668	1-554-303-21	SWITCH, TACTILE (LOOP)				
**********						
*	1-669-631-11	CD-B1 SW BOARD				
		**********				
		< CONNECTOR >				
* CN642	1-568-943-11	PIN, CONNECTOR 5P				
		< DIODE >				
D645	8-719-057-10	DIODE LNJ301MPUJAB (▷ CD PLAY)				
D646	8-719-057-97	DIODE SEL5923A-TP15 (❚❚ PAUSE)				
D647	8-719-057-10	DIODE LNJ301MPUJAB (▷ CD PLAY)				
		< RESISTOR >				
R745	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R746	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R747	1-247-843-11	CARBON	3.3K	5%	1/4W	
R748	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R749	1-247-807-31	CARBON	100	5%	1/4W	
R750	1-247-807-31	CARBON	100	5%	1/4W	
R751	1-247-807-31	CARBON	100	5%	1/4W	
		< SWITCH >				
S676	1-554-303-21	SWITCH, TACTILE (▷)				
S677	1-554-303-21	SWITCH, TACTILE (■)				
S678	1-554-303-21	SWITCH, TACTILE (❚❚)				
S679	1-554-303-21	SWITCH, TACTILE (DISC SKIP)				
**********						

Ref. No.	Part No.	Description				Remarks
*	1-669-632-11	CD-B2 SW BOARD				
		**********				
		< RESISTOR >				
R752	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R753	1-249-429-11	CARBON	10K	5%	1/4W	
R754	1-249-432-11	CARBON	18K	5%	1/4W	
R755	1-249-436-11	CARBON	39K	5%	1/4W	
R756	1-247-881-00	CARBON	120K	5%	1/4W	
		< SWITCH >				
S681	1-554-303-21	SWITCH, TACTILE (▷▷)				
S682	1-554-303-21	SWITCH, TACTILE (REPEAT)				
S683	1-554-303-21	SWITCH, TACTILE (PLAY MODE)				
S684	1-554-303-21	SWITCH, TACTILE (1/ALL DISCS)				
S685	1-554-303-21	SWITCH, TACTILE (EDIT)				
S686	1-554-303-21	SWITCH, TACTILE (◁◁)				
S711	1-467-968-11	ENCODER, ROTARY (⏮◁◁ AMS ▷▷⏭)				
**********						
*	1-664-016-11	DOOR SW BOARD				
		**********				
		< CAPACITOR >				
C691	1-164-159-21	CERAMIC	0.1uF	50V		
		< CONNECTOR >				
CN661	1-506-481-11	PIN, CONNECTOR 2P				
		< SWITCH >				
S691	1-771-057-11	SWITCH, PUSH (1 KEY) (⏏ OPEN)				
**********						
*	A-4403-916-A	HEADPHONE-MIC BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C760	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C761	1-126-961-11	ELECT	2.2uF	20%	50V	
C762	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C763	1-126-961-11	ELECT	2.2uF	20%	50V	
C764	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C765	1-162-215-31	CERAMIC	47PF	5%	50V	
C766	1-162-290-31	CERAMIC	470PF	10%	50V	
C767	1-162-215-31	CERAMIC	47PF	5%	50V	
C768	1-126-961-11	ELECT	2.2uF	20%	50V	
C769	1-162-282-31	CERAMIC	100PF	10%	50V	
C770	1-126-961-11	ELECT	2.2uF	20%	50V	
C771	1-126-959-11	ELECT	0.47uF	20%	50V	
C773	1-126-964-11	ELECT	10uF	20%	50V	
C774	1-126-964-11	ELECT	10uF	20%	50V	
C775	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C776	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C777	1-126-960-11	ELECT	1uF	20%	50V	
C778	1-162-305-11	CERAMIC	0.0068uF	30%	16V	
C779	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C780	1-136-495-11	FILM	0.068uF	5%	50V	

HEADPHONE-MIC | KEY-CON

Ref. No.	Part No.	Description			Remarks
C781	1-126-957-11	ELECT	0.22uF	20%	50V
C782	1-126-957-11	ELECT	0.22uF	20%	50V
C783	1-126-967-11	ELECT	47uF	20%	10V
C784	1-136-495-11	FILM	0.068uF	5%	50V
C785	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C786	1-162-294-31	CERAMIC	0.001uF	10%	50V
C787	1-124-250-11	ELECT	0.15uF	20%	50V
C788	1-126-960-11	ELECT	1uF	20%	50V
C789	1-161-494-00	CERAMIC	0.022uF		25V
C790	1-126-967-11	ELECT	47uF	20%	10V
C791	1-164-159-21	CERAMIC	0.1uF		50V
C794	1-164-159-21	CERAMIC	0.1uF		50V
C795	1-164-159-21	CERAMIC	0.1uF		50V
C797	1-162-302-11	CERAMIC	0.0022uF	20%	16V
C798	1-164-159-21	CERAMIC	0.1uF		50V
C799	1-164-159-21	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN701	1-568-935-11	PIN, CONNECTOR 8P			
		< DIODE >			
D761	8-719-200-82	DIODE 11ES2			
D762	8-719-200-82	DIODE 11ES2			
D763	8-719-200-82	DIODE 11ES2			
		< IC >			
IC760	8-759-634-51	IC M5218AP			
IC761	8-759-450-96	IC M65850P			
		< JACK >			
J760	1-770-226-41	JACK (LARGE TYPE) (PHONES)			
J761	1-770-226-41	JACK (LARGE TYPE) (MIC 1)			
J762	1-770-226-41	JACK (LARGE TYPE) (MIC 2)			
		< COIL >			
L761	1-410-521-11	INDUCTOR 100uH			
		< RESISTOR >			
R760	1-249-429-11	CARBON	10K	5%	1/4W
R761	1-249-417-11	CARBON	1K	5%	1/4W F
R762	1-249-429-11	CARBON	10K	5%	1/4W
R763	1-249-417-11	CARBON	1K	5%	1/4W F
R764	1-249-441-11	CARBON	100K	5%	1/4W
R765	1-249-417-11	CARBON	1K	5%	1/4W F
R766	1-249-437-11	CARBON	47K	5%	1/4W
R767	1-249-429-11	CARBON	10K	5%	1/4W
R768	1-249-431-11	CARBON	15K	5%	1/4W
R769	1-247-885-00	CARBON	180K	5%	1/4W
R770	1-247-807-31	CARBON	100	5%	1/4W
R771	1-247-863-91	CARBON	22K	5%	1/4W
R772	1-247-863-91	CARBON	22K	5%	1/4W
R773	1-247-863-91	CARBON	22K	5%	1/4W
R774	1-247-881-00	CARBON	120K	5%	1/4W
R775	1-247-863-91	CARBON	22K	5%	1/4W
R776	1-247-863-91	CARBON	22K	5%	1/4W
R777	1-247-863-91	CARBON	22K	5%	1/4W
R778	1-249-437-11	CARBON	47K	5%	1/4W
R779	1-249-431-11	CARBON	15K	5%	1/4W
R782	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remarks
		< VARIABLE RESISTOR >			
RV760	1-225-366-11	RES, VAR, CARBON 50K			
RV761	1-225-366-11	RES, VAR, CARBON 50K			
**********					
*	A-4403-922-A	KEY-CON BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C501	1-126-382-11	ELECT	100uF	20%	6.3V
C502	1-164-159-21	CERAMIC	0.1uF		50V
C503	1-126-967-11	ELECT	47uF	20%	10V
C504	1-164-159-21	CERAMIC	0.1uF		50V
C505	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C506	1-162-286-21	CERAMIC	220PF	10%	50V
C507	1-162-286-21	CERAMIC	220PF	10%	50V
C508	1-136-495-11	FILM	0.068uF	5%	50V
C509	1-136-495-11	FILM	0.068uF	5%	50V
C510	1-136-495-11	FILM	0.068uF	5%	50V
C511	1-164-159-21	CERAMIC	0.1uF		50V
C512	1-162-284-31	CERAMIC	150PF	10%	50V
C513	1-136-165-00	FILM	0.1uF	5%	50V
C514	1-136-165-00	FILM	0.1uF	5%	50V
C515	1-162-294-31	CERAMIC	0.001uF	10%	50V
C516	1-162-294-31	CERAMIC	0.001uF	10%	50V
C517	1-162-294-31	CERAMIC	0.001uF	10%	50V
C518	1-162-306-11	CERAMIC	0.01uF	20%	16V
C519	1-162-294-31	CERAMIC	0.001uF	10%	50V
C520	1-126-964-11	ELECT	10uF	20%	50V
C521	1-162-291-31	CERAMIC	560PF	10%	50V
C522	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C523	1-162-290-31	CERAMIC	470PF	10%	50V
C524	1-126-964-11	ELECT	10uF	20%	50V
C525	1-126-964-11	ELECT	10uF	20%	50V
C526	1-126-964-11	ELECT	10uF	20%	50V
C527	1-126-964-11	ELECT	10uF	20%	50V
C1439	1-126-964-11	ELECT	10uF	20%	50V
		< CONNECTOR >			
CN501	1-566-999-11	PIN, CONNECTOR 13P			
		< IC >			
IC501	8-759-370-84	IC M65847FP-TP			
IC502	8-759-140-53	IC UPD4053BC			
		< COIL >			
L501	1-410-521-11	INDUCTOR 100uH			
		< TRANSISTOR >			
Q501	8-729-119-78	TRANSISTOR 2SC403SP-51			
Q501	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q502	8-729-029-66	TRANSISTOR DTC114ESA			
Q502	8-729-900-80	TRANSISTOR DTC114ES			

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R501	1-247-807-31	CARBON	100	5%	1/4W
R502	1-249-429-11	CARBON	10K	5%	1/4W
R503	1-247-807-31	CARBON	100	5%	1/4W
R504	1-249-425-11	CARBON	4.7K	5%	1/4W F
R505	1-247-903-00	CARBON	1M	5%	1/4W
R506	1-249-429-11	CARBON	10K	5%	1/4W
R507	1-249-425-11	CARBON	4.7K	5%	1/4W F
R508	1-249-429-11	CARBON	10K	5%	1/4W
R509	1-249-434-11	CARBON	27K	5%	1/4W
R510	1-249-426-11	CARBON	5.6K	5%	1/4W
R511	1-249-424-11	CARBON	3.9K	5%	1/4W F
R512	1-249-431-11	CARBON	15K	5%	1/4W
R513	1-249-429-11	CARBON	10K	5%	1/4W
R514	1-247-863-91	CARBON	22K	5%	1/4W
R515	1-249-429-11	CARBON	10K	5%	1/4W
R516	1-249-441-11	CARBON	100K	5%	1/4W
R517	1-247-863-91	CARBON	22K	5%	1/4W
R518	1-247-863-91	CARBON	22K	5%	1/4W
R519	1-249-441-11	CARBON	100K	5%	1/4W
R520	1-249-441-11	CARBON	100K	5%	1/4W
R521	1-249-429-11	CARBON	10K	5%	1/4W
R522	1-249-425-11	CARBON	4.7K	5%	1/4W F
R523	1-249-425-11	CARBON	4.7K	5%	1/4W F
R524	1-249-429-11	CARBON	10K	5%	1/4W
R525	1-249-417-11	CARBON	1K	5%	1/4W F
**********					
*	1-650-669-11	LEAF SWITCH BOARD			
		**********			
		< CONNECTOR >			
* CN1001	1-568-854-11	SOCKET, CONNECTOR 11P			
CN1001	1-695-372-31	PIN, CONNECTOR (PC BOARD) 11P			
		< TRANSISTOR >			
Q1001	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA-H			
Q1002	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA-H			
		< RESISTOR >			
R1001	1-247-818-11	CARBON	300	5%	1/4W
R1002	1-247-820-11	CARBON	360	5%	1/4W
R1003	1-249-414-11	CARBON	560	5%	1/4W
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W
R1005	1-247-818-11	CARBON	300	5%	1/4W
		< SWITCH >			
S1001	1-692-832-11	SWITCH, PUSH (1 KEY) (A PLAY)			
S1002	1-692-832-11	SWITCH, PUSH (1 KEY) (B PLAY)			
S1004	1-571-281-21	SWITCH, LEAF (A HALF)			
S1005	1-571-281-21	SWITCH, LEAF (A CrO2)			
S1006	1-572-248-11	SWITCH, LEAF (REC A)			
S1007	1-572-248-11	SWITCH, LEAF (B HALF)			
S1008	1-571-281-21	SWITCH, LEAF (B CrO2)			
S1009	1-571-281-21	SWITCH, LEAF (REC B)			
**********					

Ref. No.	Part No.	Description			Remarks
*	1-664-017-11	LED BOARD			
		**********			
		< CONNECTOR >			
CN671	1-506-481-11	PIN, CONNECTOR 2P			
		< DIODE >			
D671	8-719-058-03	DIODE SEL5423E-TP15			
D672	8-719-058-03	DIODE SEL5423E-TP15			
D673	8-719-058-03	DIODE SEL5423E-TP15			
D674	8-719-058-03	DIODE SEL5423E-TP15			
		< RESISTOR >			
R791	1-249-412-11	CARBON	390	5%	1/4W F
**********					
*	A-4403-832-A	MAIN BOARD, COMPLETE (XB44K)			
		**********			
*	A-4403-919-A	MAIN BOARD, COMPLETE (XB33K)			
		**********			
*	4-870-539-11	PLATE, GROUND			
	7-685-646-79	SCREW +BVTP 3 × 8 TYPE2 N-S			
		< CAPACITOR >			
C100	1-164-159-21	CERAMIC	0.1uF		50V
C102	1-162-282-31	CERAMIC	100PF	10%	50V
C103	1-162-282-31	CERAMIC	100PF	10%	50V
C104	1-126-961-11	ELECT	2.2uF	20%	50V
C105	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C106	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C107	1-126-956-91	ELECT	0.1uF	20%	50V
C121	1-162-286-21	CERAMIC	220PF	10%	50V
C122	1-162-286-21	CERAMIC	220PF	10%	50V
C123	1-162-306-11	CERAMIC	0.01uF	20%	16V
C152	1-162-282-31	CERAMIC	100PF	10%	50V
C153	1-162-282-31	CERAMIC	100PF	10%	50V
C154	1-126-961-11	ELECT	2.2uF	20%	50V
C155	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C156	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C157	1-126-956-91	ELECT	0.1uF	20%	50V
C171	1-162-286-21	CERAMIC	220PF	10%	50V
C172	1-162-286-21	CERAMIC	220PF	10%	50V
C173	1-162-306-11	CERAMIC	0.01uF	20%	16V
C191	1-126-963-11	ELECT	4.7uF	20%	50V (XB44K)
C192	1-164-159-21	CERAMIC	0.1uF		50V (XB44K)
C201	1-136-167-00	FILM	0.15uF	5%	50V (XB44K)
C201	1-136-169-00	FILM	0.22uF	5%	50V (XB33K)
C202	1-136-167-00	FILM	0.15uF	5%	50V (XB44K)
C202	1-136-169-00	FILM	0.22uF	5%	50V (XB33K)

MAIN

Ref. No.	Part No.	Description			Remarks
C203	1-130-493-00	MYLAR	0.068uF	5%	50V
C204	1-130-493-00	MYLAR	0.068uF	5%	50V
C205	1-130-486-00	MYLAR	0.018uF	10%	50V
C206	1-130-486-00	MYLAR	0.018uF	10%	50V
C207	1-130-480-00	MYLAR	0.0056uF	5%	50V
C208	1-130-479-00	MYLAR	0.0047uF	5%	50V
C209	1-130-474-00	MYLAR	0.0018uF	5%	50V
C210	1-126-964-11	ELECT	10uF	20%	50V
C211	1-126-964-11	ELECT	10uF	20%	50V
C212	1-130-483-00	MYLAR	0.01uF	5%	50V
C213	1-136-169-00	FILM	0.22uF	5%	50V
C214	1-136-169-00	FILM	0.22uF	5%	50V
C215	1-162-294-31	CERAMIC	0.001uF	10%	50V
C216	1-136-167-00	FILM	0.15uF	5%	50V
C221	1-126-967-11	ELECT	47uF	20%	10V
C222	1-126-967-11	ELECT	47uF	20%	10V
C223	1-126-964-11	ELECT	10uF	20%	50V
C224	1-162-290-31	CERAMIC	470PF	10%	50V
C226	1-126-964-11	ELECT	10uF	20%	50V
C231	1-109-889-11	ELECT	1uF	20%	50V
C251	1-136-167-00	FILM	0.15uF	5%	50V (XB44K)
C251	1-136-169-00	FILM	0.22uF	5%	50V (XB33K)
C252	1-136-167-00	FILM	0.15uF	5%	50V (XB44K)
C252	1-136-169-00	FILM	0.22uF	5%	50V (XB33K)
C253	1-130-493-00	MYLAR	0.068uF	5%	50V
C254	1-130-493-00	MYLAR	0.068uF	5%	50V
C255	1-130-486-00	MYLAR	0.018uF	10%	50V
C256	1-130-486-00	MYLAR	0.018uF	10%	50V
C257	1-130-480-00	MYLAR	0.0056uF	5%	50V
C258	1-130-479-00	MYLAR	0.0047uF	5%	50V
C259	1-130-474-00	MYLAR	0.0018uF	5%	50V
C260	1-126-964-11	ELECT	10uF	20%	50V
C261	1-126-964-11	ELECT	10uF	20%	50V
C262	1-130-483-00	MYLAR	0.01uF	5%	50V
C263	1-136-169-00	FILM	0.22uF	5%	50V
C264	1-136-169-00	FILM	0.22uF	5%	50V
C276	1-126-964-11	ELECT	10uF	20%	50V
C281	1-104-665-11	ELECT	100uF	20%	10V
C282	1-126-961-11	ELECT	2.2uF	20%	50V
C283	1-104-665-11	ELECT	100uF	20%	10V
C284	1-126-934-11	ELECT	220uF	20%	10V
C291	1-126-959-11	ELECT	0.47uF	20%	50V
C301	1-126-967-11	ELECT	47uF	20%	10V
C302	1-164-159-21	CERAMIC	0.1uF		50V
C303	1-136-173-00	FILM	0.47uF	5%	50V
C304	1-126-926-11	ELECT	1000uF	20%	10V
C305	1-162-306-11	CERAMIC	0.01uF	20%	16V
C309	1-102-518-11	CERAMIC	33PF	5%	50V
C310	1-102-516-11	CERAMIC	27PF	5%	50V
C311	1-164-159-21	CERAMIC	0.1uF		50V
C315	1-104-665-11	ELECT	100uF	20%	10V
C316	1-136-165-00	FILM	0.1uF	5%	50V
C390	1-104-665-11	ELECT	100uF	20%	10V
C391	1-162-306-11	CERAMIC	0.01uF	20%	16V
C392	1-104-665-11	ELECT	100uF	20%	10V

Ref. No.	Part No.	Description			Remarks
C393	1-126-925-11	ELECT	470uF	20%	10V
C394	1-164-159-21	CERAMIC	0.1uF		50V
C396	1-126-961-11	ELECT	2.2uF	20%	50V
C398	1-126-961-11	ELECT	2.2uF	20%	50V
C903	1-136-165-00	FILM	0.1uF	5%	50V
C904	1-126-937-11	ELECT	4700uF	20%	16V
C906	1-104-665-11	ELECT	100uF	20%	10V
C909	1-126-964-11	ELECT	10uF	20%	50V
C910	1-104-665-11	ELECT	100uF	20%	10V
C911	1-126-964-11	ELECT	10uF	20%	50V
C912	1-126-916-11	ELECT	1000uF	20%	6.3V
C913	1-126-943-11	ELECT	2200uF	20%	25V
C914	1-126-767-11	ELECT	1000uF	20%	16V
C915	1-126-967-11	ELECT	47uF	20%	16V
C916	1-164-159-21	CERAMIC	0.1uF		50V
C917	1-126-968-11	ELECT	100uF	20%	50V
C918	1-126-968-11	ELECT	100uF	20%	50V
C919	1-126-964-11	ELECT	10uF	20%	50V
C920	1-126-947-11	ELECT	47uF	20%	35V
C953	1-136-165-00	FILM	0.1uF	5%	50V
C954	1-126-768-11	ELECT	2200uF	20%	16V
C956	1-104-665-11	ELECT	100uF	20%	10V
C1501	1-130-479-00	MYLAR	0.0047uF	5%	50V
C1502	1-162-290-31	CERAMIC	470PF	10%	50V
C1503	1-164-159-21	CERAMIC	0.1uF		50V
C1504	1-126-960-11	ELECT	1uF	20%	50V
C1505	1-126-964-11	ELECT	10uF	20%	50V
C1506	1-126-964-11	ELECT	10uF	20%	50V
C1507	1-126-960-11	ELECT	1uF	20%	50V
C1508	1-104-665-11	ELECT	100uF	20%	10V
C1523	1-126-933-11	ELECT	100uF	20%	16V
C1531	1-164-159-21	CERAMIC	0.1uF		50V
C1532	1-164-159-21	CERAMIC	0.1uF		50V
C1533	1-164-159-21	CERAMIC	0.1uF		50V
C1534	1-126-935-11	ELECT	470uF	20%	16V
C1551	1-130-479-00	MYLAR	0.0047uF	5%	50V
C1552	1-162-290-31	CERAMIC	470PF	10%	50V
C1553	1-164-159-21	CERAMIC	0.1uF		50V
C1554	1-126-960-11	ELECT	1uF	20%	50V
C1555	1-126-964-11	ELECT	10uF	20%	50V
C1556	1-126-964-11	ELECT	10uF	20%	50V
C1557	1-126-960-11	ELECT	1uF	20%	50V
C1558	1-104-665-11	ELECT	100uF	20%	10V

< CONNECTOR >

	CN101	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P
*	CN102	1-568-836-11	SOCKET, CONNECTOR 17P
	CN105	1-564-506-11	PLUG, CONNECTOR 3P (XB44K)
*	CN201	1-568-832-11	SOCKET, CONNECTOR 13P
	CN202	1-568-802-11	SOCKET, CONNECTOR 19P
*	CN203	1-568-936-11	PIN, CONNECTOR 9P
	CN205	1-568-838-11	SOCKET, CONNECTOR 21P
*	CN206	1-568-830-11	SOCKET, CONNECTOR 11P
*	CN207	1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D141	8-719-991-33	DIODE 1SS133T-77	
D191	8-719-991-33	DIODE 1SS133T-77 (XB44K)	
D192	8-719-991-33	DIODE 1SS133T-77 (XB44K)	
D281	8-719-991-33	DIODE 1SS133T-77	
D291	8-719-991-33	DIODE 1SS133T-77	
D301	8-719-200-82	DIODE 11ES2-NTA1B	
D302	8-719-200-82	DIODE 11ES2-NTA1B	
D303	8-719-991-33	DIODE 1SS133T-77	
D304	8-719-991-33	DIODE 1SS133T-77	
D305	8-719-991-33	DIODE 1SS133T-77	
D306	8-719-991-33	DIODE 1SS133T-77	
D307	8-719-991-33	DIODE 1SS133T-77	
D309	8-719-991-33	DIODE 1SS133T-77	
D902	8-719-200-82	DIODE 11ES2-NTA1B	
D903	8-719-200-82	DIODE 11ES2-NTA1B	
D904	8-719-200-82	DIODE 11ES2-NTA1B	
D905	8-719-200-82	DIODE 11ES2-NTA1B	
D906	8-719-200-82	DIODE 11ES2-NTA1B	
D907	8-719-200-82	DIODE 11ES2-NTA1B	
D908	8-719-200-82	DIODE 11ES2-NTA1B	
D909	8-719-200-82	DIODE 11ES2-NTA1B	
D910	8-719-982-26	DIODE MTZJ-T-77-33B	
D911	8-719-109-66	DIODE MTZJ-T-77-3.3B	
D912	8-719-991-33	DIODE 1SS133T-77	
D913	8-719-200-82	DIODE 11ES2-NTA1B	
D914	8-719-200-82	DIODE 11ES2-NTA1B	
D915	8-719-935-69	DIODE UZL-11M1-TA	
D951	8-719-991-33	DIODE 1SS133T-77	
D952	8-719-991-33	DIODE 1SS133T-77	
		< FERRITE BEAD >	
FB302	1-412-473-21	INDUCTOR 0uH	
		< IC >	
IC101	8-759-634-50	IC M5218AL	
IC102	8-759-000-48	IC MC14052BCP	
IC201	8-759-460-02	IC M62427FP-A	
IC231	8-759-634-50	IC M5218AL	
IC281	8-759-111-68	IC uPC1237HA	
IC301	8-759-531-31	IC uPD780018YGF-028-3BA	
IC302	8-759-635-63	IC M51943BSL-TP	
IC391	8-749-923-04	IC TOTX178	
IC901	8-759-288-53	IC LA5617	
IC902	8-759-604-86	IC M5F7807L	
IC903	8-759-231-53	IC M5F7805L	
IC904	8-759-231-58	IC NJM7812FA	
IC904	8-759-604-39	IC M5F78M12L	
IC1501	8-759-363-21	IC HA12203NT	
IC1502	8-759-822-09	IC LB1641	
		< JACK >	
J101	1-784-275-11	JACK, PIN 6P (PHONO, VIDEO (AUDIO)IN, OUT)	

Ref. No.	Part No.	Description	Remarks
		< COIL >	
L301	1-410-509-11	INDUCTOR 10uH	
L393	1-410-515-11	INDUCTOR 33uH	
		< TRANSISTOR >	
Q101	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
Q102	8-729-029-40	TRANSISTOR DTA124ESA-TP	
Q103	8-729-029-86	TRANSISTOR DTC124ESA-TP	
Q141	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
Q142	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA	
Q151	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
Q191	8-729-119-76	TRANSISTOR 2SA1175TP-HFE (XB44K)	
Q192	8-729-111-29	TRANSISTOR 2SD1616-TP-LK (XB44K)	
Q201	8-729-029-86	TRANSISTOR DTC124ESA-TP (XB44K)	
Q202	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q203	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q204	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
Q231	8-729-029-40	TRANSISTOR DTA124ESA-TP	
Q232	8-729-029-40	TRANSISTOR DTA124ESA-TP	
Q251	8-729-029-86	TRANSISTOR DTC124ESA-TP (XB44K)	
Q252	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q253	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q254	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
Q281	8-729-029-86	TRANSISTOR DTC124ESA-TP	
Q282	8-729-029-40	TRANSISTOR DTA124ESA-TP	
Q283	8-729-029-86	TRANSISTOR DTC124ESA-TP	
Q301	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q901	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q902	8-729-029-86	TRANSISTOR DTC124ESA-TP	
Q903	8-729-026-68	TRANSISTOR 2SD2525(TP)	
Q904	8-729-030-19	TRANSISTOR 2SB1640(TP)	
Q905	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q906	8-729-029-40	TRANSISTOR DTA124ESA-TP	
Q907	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q1531	8-729-801-93	TRANSISTOR 2SD1387-34-TP	
Q1532	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q1533	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q1534	8-729-119-77	TRANSISTOR 2SA1175TP-FEK	
Q1535	8-729-029-66	TRANSISTOR DTC114ESA-TP	
		< RESISTOR >	
R102	1-249-417-11	CARBON 1K 5% 1/4W F	
R103	1-249-437-11	CARBON 47K 5% 1/4W	
R104	1-249-417-11	CARBON 1K 5% 1/4W F	
R105	1-247-897-11	CARBON 560K 5% 1/4W	
R106	1-249-437-11	CARBON 47K 5% 1/4W	
R107	1-249-417-11	CARBON 1K 5% 1/4W F	
R108	1-249-441-11	CARBON 100K 5% 1/4W	
R121	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R122	1-247-887-00	CARBON 220K 5% 1/4W	
R123	1-249-426-11	CARBON 5.6K 5% 1/4W	
R124	1-249-429-11	CARBON 10K 5% 1/4W	
R125	1-249-441-11	CARBON 100K 5% 1/4W	
R126	1-249-417-11	CARBON 1K 5% 1/4W F	
R127	1-249-441-11	CARBON 100K 5% 1/4W	

MAIN

Ref. No.	Part No.	Description			Remarks
R133	1-260-091-11	CARBON	220	5%	1/2W
R134	1-260-091-11	CARBON	220	5%	1/2W
R140	1-249-429-11	CARBON	10K	5%	1/4W
R141	1-249-437-11	CARBON	47K	5%	1/4W
R142	1-249-429-11	CARBON	10K	5%	1/4W
⚠R147	1-216-457-00	METAL OXIDE	1.2K	5%	2W F (XB33K)
⚠R147	1-216-458-11	METAL OXIDE	1.8K	5%	2W F (XB44K)
R152	1-249-417-11	CARBON	1K	5%	1/4W F
R153	1-249-437-11	CARBON	47K	5%	1/4W
R154	1-249-417-11	CARBON	1K	5%	1/4W F
R155	1-247-897-11	CARBON	560K	5%	1/4W
R156	1-249-437-11	CARBON	47K	5%	1/4W
R157	1-249-417-11	CARBON	1K	5%	1/4W F
R158	1-249-441-11	CARBON	100K	5%	1/4W
R171	1-249-424-11	CARBON	3.9K	5%	1/4W F
R172	1-247-887-00	CARBON	220K	5%	1/4W
R173	1-249-426-11	CARBON	5.6K	5%	1/4W
R174	1-249-429-11	CARBON	10K	5%	1/4W
R176	1-249-417-11	CARBON	1K	5%	1/4W F
R177	1-249-441-11	CARBON	100K	5%	1/4W
R183	1-260-091-11	CARBON	220	5%	1/2W
R184	1-260-091-11	CARBON	220	5%	1/2W
R191	1-249-425-11	CARBON	4.7K	5%	1/4W F (XB44K)
R192	1-249-441-11	CARBON	100K	5%	1/4W (XB44K)
R193	1-249-421-11	CARBON	2.2K	5%	1/4W F (XB44K)
R194	1-249-437-11	CARBON	47K	5%	1/4W (XB44K)
R195	1-249-437-11	CARBON	47K	5%	1/4W (XB44K)
R201	1-249-429-11	CARBON	10K	5%	1/4W
R202	1-247-863-91	CARBON	22K	5%	1/4W
R203	1-249-441-11	CARBON	100K	5%	1/4W
R205	1-247-863-91	CARBON	22K	5%	1/4W
R206	1-249-421-11	CARBON	2.2K	5%	1/4W F
R207	1-249-431-11	CARBON	15K	5%	1/4W
R209	1-249-441-11	CARBON	100K	5%	1/4W
R210	1-247-896-11	CARBON	510K	5%	1/4W
R211	1-247-891-00	CARBON	330K	5%	1/4W (XB44K)
R212	1-247-826-00	CARBON	620	5%	1/4W
R213	1-249-429-11	CARBON	10K	5%	1/4W
R214	1-249-437-11	CARBON	47K	5%	1/4W
R215	1-247-903-00	CARBON	1M	5%	1/4W
R216	1-249-429-11	CARBON	10K	5%	1/4W
R217	1-249-437-11	CARBON	47K	5%	1/4W
R222	1-249-425-11	CARBON	4.7K	5%	1/4W F
R226	1-249-421-11	CARBON	2.2K	5%	1/4W F
R227	1-249-441-11	CARBON	100K	5%	1/4W
R228	1-249-429-11	CARBON	10K	5%	1/4W
R231	1-249-437-11	CARBON	47K	5%	1/4W
R232	1-249-437-11	CARBON	47K	5%	1/4W
R234	1-247-886-11	CARBON	200K	5%	1/4W
R235	1-249-421-11	CARBON	2.2K	5%	1/4W F

Ref. No.	Part No.	Description			Remarks
R236	1-249-441-11	CARBON	100K	5%	1/4W
R253	1-249-441-11	CARBON	100K	5%	1/4W
R257	1-249-431-11	CARBON	15K	5%	1/4W
R259	1-249-441-11	CARBON	100K	5%	1/4W
R260	1-247-896-11	CARBON	510K	5%	1/4W
R261	1-247-891-00	CARBON	330K	5%	1/4W (XB44K)
R262	1-247-826-00	CARBON	620	5%	1/4W
R263	1-249-429-11	CARBON	10K	5%	1/4W
R264	1-249-437-11	CARBON	47K	5%	1/4W
R265	1-247-903-00	CARBON	1M	5%	1/4W
R266	1-249-429-11	CARBON	10K	5%	1/4W
R267	1-249-437-11	CARBON	47K	5%	1/4W
R271	1-249-425-11	CARBON	4.7K	5%	1/4W F
R272	1-249-425-11	CARBON	4.7K	5%	1/4W F
R276	1-249-421-11	CARBON	2.2K	5%	1/4W F
R277	1-249-441-11	CARBON	100K	5%	1/4W
R278	1-249-429-11	CARBON	10K	5%	1/4W
R281	1-249-429-11	CARBON	10K	5%	1/4W
R282	1-249-429-11	CARBON	10K	5%	1/4W
R283	1-249-435-11	CARBON	33K	5%	1/4W
R284	1-247-791-91	CARBON	22	5%	1/4W
R285	1-249-441-11	CARBON	100K	5%	1/4W
R286	1-249-429-11	CARBON	10K	5%	1/4W
R287	1-249-429-11	CARBON	10K	5%	1/4W
R288	1-249-438-11	CARBON	56K	5%	1/4W
R289	1-249-437-11	CARBON	47K	5%	1/4W
R291	1-247-863-91	CARBON	22K	5%	1/4W
R292	1-247-863-91	CARBON	22K	5%	1/4W
R293	1-249-421-11	CARBON	2.2K	5%	1/4W F
R294	1-249-441-11	CARBON	100K	5%	1/4W
R295	1-247-903-00	CARBON	1M	5%	1/4W
R301	1-249-413-11	CARBON	470	5%	1/4W F
R302	1-249-425-11	CARBON	4.7K	5%	1/4W F
R303	1-249-437-11	CARBON	47K	5%	1/4W
R304	1-249-437-11	CARBON	47K	5%	1/4W
R305	1-249-429-11	CARBON	10K	5%	1/4W
R311	1-247-807-31	CARBON	100	5%	1/4W
R312	1-247-807-31	CARBON	100	5%	1/4W
R313	1-247-807-31	CARBON	100	5%	1/4W
R316	1-249-429-11	CARBON	10K	5%	1/4W
R318	1-249-429-11	CARBON	10K	5%	1/4W
R319	1-249-429-11	CARBON	10K	5%	1/4W
R320	1-249-429-11	CARBON	10K	5%	1/4W
R322	1-249-425-11	CARBON	4.7K	5%	1/4W F
R323	1-247-807-31	CARBON	100	5%	1/4W
R325	1-249-431-11	CARBON	15K	5%	1/4W
R326	1-249-415-11	CARBON	680	5%	1/4W F
R327	1-247-807-31	CARBON	100	5%	1/4W
R328	1-247-807-31	CARBON	100	5%	1/4W
R330	1-247-807-31	CARBON	100	5%	1/4W
R331	1-247-807-31	CARBON	100	5%	1/4W
R332	1-247-807-31	CARBON	100	5%	1/4W
R333	1-247-807-31	CARBON	100	5%	1/4W
R339	1-247-807-31	CARBON	100	5%	1/4W
R340	1-247-807-31	CARBON	100	5%	1/4W

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
R341	1-247-807-31	CARBON	100	5%	1/4W
R342	1-247-807-31	CARBON	100	5%	1/4W
R344	1-247-807-31	CARBON	100	5%	1/4W
R345	1-247-807-31	CARBON	100	5%	1/4W
R346	1-247-807-31	CARBON	100	5%	1/4W
R349	1-247-807-31	CARBON	100	5%	1/4W
R350	1-247-807-31	CARBON	100	5%	1/4W
R351	1-247-807-31	CARBON	100	5%	1/4W
R352	1-247-807-31	CARBON	100	5%	1/4W
R353	1-247-807-31	CARBON	100	5%	1/4W
R354	1-247-807-31	CARBON	100	5%	1/4W
R355	1-247-807-31	CARBON	100	5%	1/4W
R356	1-247-807-31	CARBON	100	5%	1/4W
R357	1-247-807-31	CARBON	100	5%	1/4W
R359	1-247-807-31	CARBON	100	5%	1/4W
R360	1-247-807-31	CARBON	100	5%	1/4W
R366	1-247-807-31	CARBON	100	5%	1/4W
R367	1-249-429-11	CARBON	10K	5%	1/4W
R368	1-247-843-11	CARBON	3.3K	5%	1/4W
R369	1-249-429-11	CARBON	10K	5%	1/4W
R384	1-249-429-11	CARBON	10K	5%	1/4W
R395	1-247-807-31	CARBON	100	5%	1/4W
R396	1-249-435-11	CARBON	33K	5%	1/4W
R397	1-247-807-31	CARBON	100	5%	1/4W
R398	1-249-435-11	CARBON	33K	5%	1/4W
R417	1-249-441-11	CARBON	100K	5%	1/4W
R913	1-247-815-91	CARBON	220	5%	1/4W
R914	1-249-417-11	CARBON	1K	5%	1/4W F
R915	1-249-425-11	CARBON	4.7K	5%	1/4W F
R916	1-247-815-91	CARBON	220	5%	1/4W
R917	1-247-815-91	CARBON	220	5%	1/4W
R918	1-249-425-11	CARBON	4.7K	5%	1/4W F
R920	1-249-417-11	CARBON	1K	5%	1/4W F
R921	1-247-895-91	CARBON	470K	5%	1/4W
R951	1-249-425-11	CARBON	4.7K	5%	1/4W F
R952	1-249-425-11	CARBON	4.7K	5%	1/4W F
R1501	1-249-435-11	CARBON	33K	5%	1/4W
R1502	1-249-417-11	CARBON	1K	5%	1/4W F
R1503	1-249-426-11	CARBON	5.6K	5%	1/4W
R1504	1-247-840-00	CARBON	2.4K	5%	1/4W
R1505	1-247-863-91	CARBON	22K	5%	1/4W
R1506	1-249-421-11	CARBON	2.2K	5%	1/4W F
R1507	1-249-428-11	CARBON	8.2K	5%	1/4W F
R1521	1-247-852-11	CARBON	7.5K	5%	1/4W
R1522	1-249-422-11	CARBON	2.7K	5%	1/4W F
R1524	1-249-429-11	CARBON	10K	5%	1/4W
R1525	1-249-432-11	CARBON	18K	5%	1/4W
R1526	1-249-429-11	CARBON	10K	5%	1/4W
R1527	1-249-429-11	CARBON	10K	5%	1/4W
R1531	1-247-843-11	CARBON	3.3K	5%	1/4W
R1532	1-249-411-11	CARBON	330	5%	1/4W
R1533	1-249-427-11	CARBON	6.8K	5%	1/4W F
R1534	1-249-429-11	CARBON	10K	5%	1/4W
R1535	1-249-425-11	CARBON	4.7K	5%	1/4W F
R1536	1-249-425-11	CARBON	4.7K	5%	1/4W F

Ref. No.	Part No.	Description			Remarks
R1541	1-249-425-11	CARBON	4.7K	5%	1/4W F
R1542	1-249-425-11	CARBON	4.7K	5%	1/4W F
R1543	1-249-425-11	CARBON	4.7K	5%	1/4W F
R1544	1-249-417-11	CARBON	1K	5%	1/4W F
R1545	1-249-437-11	CARBON	47K	5%	1/4W
R1546	1-249-437-11	CARBON	47K	5%	1/4W
R1547	1-249-437-11	CARBON	47K	5%	1/4W
R1548	1-249-437-11	CARBON	47K	5%	1/4W
R1551	1-247-863-91	CARBON	22K	5%	1/4W
R1552	1-249-417-11	CARBON	1K	5%	1/4W F
R1553	1-249-426-11	CARBON	5.6K	5%	1/4W
R1554	1-247-840-00	CARBON	2.4K	5%	1/4W
R1555	1-247-863-91	CARBON	22K	5%	1/4W
R1556	1-249-421-11	CARBON	2.2K	5%	1/4W F
R1557	1-249-428-11	CARBON	8.2K	5%	1/4W F

< VARIABLE RESISTOR >

RV1501	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV1551	1-238-598-11	RES, ADJ, CARBON 2.2K			

< RELAY >

RY141	1-755-141-11	RELAY			

< TERMINAL >

TM131	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SURROUND SPEAKER)			
TM131	1-537-925-41	TERMINAL BOARD			
TM132	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SURROUND SPEAKER) (XB33K)			
TM132	1-537-925-41	TERMINAL BOARD (XB33K)			

< VIBRATOR >

X301	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			
X302	1-567-098-41	VIBRATOR, CRYSTAL (32.768MHz)			

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*	A-4403-835-A	PANEL BOARD, COMPLETE (XB44K) **********			
*	A-4403-917-A	PANEL BOARD, COMPLETE (XB33K) **********			
*	4-932-810-31	CUSHION (FL)			
*	4-978-168-01	HOLDER, FL TUBE			

< CAPACITOR >

C601	1-126-967-11	ELECT	47uF	20%	50V
C602	1-162-306-11	CERAMIC	0.01uF	20%	16V
C603	1-126-963-11	ELECT	4.7uF	20%	50V
C604	1-126-960-11	ELECT	1uF	20%	50V
C606	1-126-960-11	ELECT	1uF	20%	50V
C608	1-126-382-11	ELECT	100uF	20%	6.3V
C610	1-162-306-11	CERAMIC	0.01uF	20%	16V
C611	1-162-306-11	CERAMIC	0.01uF	20%	16V
C621	1-126-957-11	ELECT	0.22uF	20%	50V
C622	1-162-306-11	CERAMIC	0.01uF	20%	16V
C623	1-126-957-11	ELECT	0.22uF	20%	50V
C624	1-136-159-00	FILM	0.033uF	5%	50V
C625	1-162-302-11	CERAMIC	0.0022uF	20%	16V
C626	1-126-957-11	ELECT	0.22uF	20%	50V
C632	1-126-957-11	ELECT	0.22uF	20%	50V

PANEL

Ref. No.	Part No.	Description			Remarks
C641	1-162-286-21	CERAMIC	220PF	10%	50V
C642	1-162-286-21	CERAMIC	220PF	10%	50V
C643	1-162-286-21	CERAMIC	220PF	10%	50V
C644	1-162-286-21	CERAMIC	220PF	10%	50V
C645	1-162-286-21	CERAMIC	220PF	10%	50V
C646	1-162-286-21	CERAMIC	220PF	10%	50V
C647	1-162-286-21	CERAMIC	220PF	10%	50V
C648	1-162-286-21	CERAMIC	220PF	10%	50V
C649	1-162-286-21	CERAMIC	220PF	10%	50V
C650	1-162-286-21	CERAMIC	220PF	10%	50V
C651	1-162-286-21	CERAMIC	220PF	10%	50V
C652	1-162-286-21	CERAMIC	220PF	10%	50V
C653	1-162-286-21	CERAMIC	220PF	10%	50V
C654	1-162-286-21	CERAMIC	220PF	10%	50V
C655	1-162-286-21	CERAMIC	220PF	10%	50V
C696	1-164-159-21	CERAMIC	0.1uF		50V
C697	1-162-294-31	CERAMIC	0.001uF	10%	50V
C698	1-136-165-00	FILM	0.1uF	5%	50V (XB33K)
		< CONNECTOR >			
* CN601	1-568-836-11	SOCKET, CONNECTOR 17P			
CN602	1-506-486-11	PIN, CONNECTOR 7P			
* CN603	1-568-944-11	PIN, CONNECTOR 6P			
* CN604	1-568-946-11	PIN, CONNECTOR 8P			
		< DIODE >			
D601	8-719-991-33	DIODE 1SS133T-77			
D602	8-719-991-33	DIODE 1SS133T-77			
D606	8-719-991-33	DIODE 1SS133T-77			
D607	8-719-991-33	DIODE 1SS133T-77			
D611	8-719-057-10	DIODE LNJ301MPUJAB (TUNER/BAND)			
D612	8-719-057-10	DIODE LNJ301MPUJAB (TUNER/BAND)			
D613	8-719-058-04	DIODE SEL5223S-TP15 (ENTER/NEXT)			
D614	8-719-058-04	DIODE SEL5223S-TP15 (GROOVE)			
D615	8-719-058-04	DIODE SEL5223S-TP15 (SUPER WOOFER)			(XB44K)
D616	8-719-058-04	DIODE SEL5223S-TP15 (EFFECT)			
D617	8-719-058-04	DIODE SEL5223S-TP15 (ENTER)			
D618	8-719-058-04	DIODE SEL5223S-TP15 (FILE 1)			
D619	8-719-058-04	DIODE SEL5223S-TP15 (FILE 2)			
D620	8-719-058-04	DIODE SEL5223S-TP15 (FILE 3)			
D621	8-719-058-04	DIODE SEL5223S-TP15 (FILE 4)			
D622	8-719-058-04	DIODE SEL5223S-TP15 (FILE 5)			
D623	8-719-058-04	DIODE SEL5223S-TP15 (P FILE)			
D624	8-719-058-04	DIODE SEL5223S-TP15 (MENU 2)			
D625	8-719-058-04	DIODE SEL5223S-TP15 (MENU 1)			
		< FERRITE BEAD >			
FB601	1-412-473-21	INDUCTOR 0uH			
		< FILTER >			
FL601	1-517-619-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC601	8-759-493-77	IC TMP87CH74F-6638			
IC602	8-759-459-84	IC NJL56H400			

Ref. No.	Part No.	Description			Remarks
		< COIL >			
L601	1-410-509-11	INDUCTOR 10uH			
		< TRANSISTOR >			
Q601	8-729-119-78	TRANSISTOR 2SC2785TP-HFE			
Q601	8-729-620-05	TRANSISTOR 2SC2603TP-EF			
Q602	8-729-118-00	TRANSISTOR 2SB1116-TP-LK			
Q603	8-729-118-00	TRANSISTOR 2SB1116-TP-LK			
Q604	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q605	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q606	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q607	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q608	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q609	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q610	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q611	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q614	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q617	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q618	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q619	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
Q621	8-729-119-77	TRANSISTOR 2SA1175TP-FEK			
		< RESISTOR >			
R601	1-249-415-11	CARBON	680	5%	1/4W F (XB44K)
R602	1-249-431-11	CARBON	15K	5%	1/4W (XB44K)
R603	1-247-903-00	CARBON	1M	5%	1/4W
R608	1-249-429-11	CARBON	10K	5%	1/4W
R609	1-247-843-11	CARBON	3.3K	5%	1/4W
R610	1-247-843-11	CARBON	3.3K	5%	1/4W
R611	1-249-429-11	CARBON	10K	5%	1/4W
R612	1-249-429-11	CARBON	10K	5%	1/4W
R613	1-249-401-11	CARBON	47	5%	1/4W F
R614	1-249-429-11	CARBON	10K	5%	1/4W
R615	1-249-429-11	CARBON	10K	5%	1/4W
R616	1-249-429-11	CARBON	10K	5%	1/4W
R617	1-249-429-11	CARBON	10K	5%	1/4W
R621	1-249-421-11	CARBON	2.2K	5%	1/4W F
R622	1-249-437-11	CARBON	47K	5%	1/4W
R623	1-247-895-91	CARBON	470K	5%	1/4W
R624	1-249-421-11	CARBON	2.2K	5%	1/4W F
R625	1-249-437-11	CARBON	47K	5%	1/4W
R626	1-247-895-91	CARBON	470K	5%	1/4W
R633	1-247-897-11	CARBON	560K	5%	1/4W
R634	1-247-897-11	CARBON	560K	5%	1/4W
R636	1-249-435-11	CARBON	33K	5%	1/4W
R637	1-247-895-91	CARBON	470K	5%	1/4W
R641	1-249-427-11	CARBON	6.8K	5%	1/4W F
R642	1-247-815-91	CARBON	220	5%	1/4W
R643	1-249-410-11	CARBON	270	5%	1/4W F
R644	1-249-412-11	CARBON	390	5%	1/4W F
R645	1-249-413-11	CARBON	470	5%	1/4W F
R646	1-249-415-11	CARBON	680	5%	1/4W F
R647	1-249-416-11	CARBON	820	5%	1/4W F

Ref. No.	Part No.	Description			Remarks
R648	1-249-418-11	CARBON	1.2K	5%	1/4W F
R649	1-249-419-11	CARBON	1.5K	5%	1/4W F
R650	1-249-427-11	CARBON	6.8K	5%	1/4W F
R651	1-247-815-91	CARBON	220	5%	1/4W
R652	1-249-410-11	CARBON	270	5%	1/4W F
R653	1-249-412-11	CARBON	390	5%	1/4W F
R654	1-249-413-11	CARBON	470	5%	1/4W F
R655	1-249-415-11	CARBON	680	5%	1/4W F
R656	1-249-416-11	CARBON	820	5%	1/4W F
R657	1-249-418-11	CARBON	1.2K	5%	1/4W F
R658	1-249-427-11	CARBON	6.8K	5%	1/4W F
R659	1-247-815-91	CARBON	220	5%	1/4W
R660	1-249-410-11	CARBON	270	5%	1/4W F
R661	1-249-412-11	CARBON	390	5%	1/4W F
R662	1-249-427-11	CARBON	6.8K	5%	1/4W F
R663	1-247-815-91	CARBON	220	5%	1/4W
R664	1-249-410-11	CARBON	270	5%	1/4W F
R665	1-249-412-11	CARBON	390	5%	1/4W F
R666	1-249-413-11	CARBON	470	5%	1/4W F
R667	1-249-415-11	CARBON	680	5%	1/4W F
R668	1-249-416-11	CARBON	820	5%	1/4W F
R669	1-249-418-11	CARBON	1.2K	5%	1/4W F
R670	1-249-419-11	CARBON	1.5K	5%	1/4W F
R671	1-249-421-11	CARBON	2.2K	5%	1/4W F
R672	1-247-843-11	CARBON	3.3K	5%	1/4W
R673	1-249-425-11	CARBON	4.7K	5%	1/4W F
R674	1-249-427-11	CARBON	6.8K	5%	1/4W F
R675	1-249-429-11	CARBON	10K	5%	1/4W
R676	1-249-432-11	CARBON	18K	5%	1/4W
R677	1-249-436-11	CARBON	39K	5%	1/4W
R678	1-249-413-11	CARBON	470	5%	1/4W F
R681	1-249-429-11	CARBON	10K	5%	1/4W
R682	1-249-421-11	CARBON	2.2K	5%	1/4W F
R683	1-247-887-00	CARBON	220K	5%	1/4W
R684	1-249-421-11	CARBON	2.2K	5%	1/4W F
R685	1-247-815-91	CARBON	220	5%	1/4W
R686	1-247-807-31	CARBON	100	5%	1/4W
R687	1-247-807-31	CARBON	100	5%	1/4W
R688	1-247-807-31	CARBON	100	5%	1/4W
R689	1-247-807-31	CARBON	100	5%	1/4W
R690	1-247-807-31	CARBON	100	5%	1/4W (XB44K)
R691	1-247-807-31	CARBON	100	5%	1/4W
R692	1-247-807-31	CARBON	100	5%	1/4W
R693	1-247-807-31	CARBON	100	5%	1/4W
R694	1-247-807-31	CARBON	100	5%	1/4W
R695	1-247-807-31	CARBON	100	5%	1/4W
R696	1-247-807-31	CARBON	100	5%	1/4W
R697	1-247-807-31	CARBON	100	5%	1/4W
R698	1-247-807-31	CARBON	100	5%	1/4W
R699	1-247-807-31	CARBON	100	5%	1/4W
R700	1-247-807-31	CARBON	100	5%	1/4W

Ref. No.	Part No.	Description			Remarks
		< SWITCH >			
S601	1-554-303-21	SWITCH, TACTILE (ENTER/NEXT)			
S602	1-554-303-21	SWITCH, TACTILE (TUNER MEMORY)			
S603	1-554-303-21	SWITCH, TACTILE (TUNING MODE)			
S604	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)			
S605	1-554-303-21	SWITCH, TACTILE (TUNING +)			
S606	1-554-303-21	SWITCH, TACTILE (TUNING –)			
S607	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)			
S608	1-554-303-21	SWITCH, TACTILE (FUNCTION)			
S609	1-554-303-21	SWITCH, TACTILE (GROOVE)			
S610	1-554-303-21	SWITCH, TACTILE (GEQ △)			
S611	1-554-303-21	SWITCH, TACTILE (GEQ ◁)			
S612	1-554-303-21	SWITCH, TACTILE (GEQ ▷)			
S613	1-554-303-21	SWITCH, TACTILE (GEQ ▽)			
S614	1-554-303-21	SWITCH, TACTILE (SUPER WOOFER)			
S615	1-554-303-21	SWITCH, TACTILE (SUPER W MODE)			(XB44K)
S616	1-554-303-21	SWITCH, TACTILE (GEQ CONTROL)			
S617	1-554-303-21	SWITCH, TACTILE (ENTER)			
S618	1-554-303-21	SWITCH, TACTILE (EFFECT)			
S619	1-554-303-21	SWITCH, TACTILE (SPECTRUM ANALYZER)			
S620	1-554-303-21	SWITCH, TACTILE (DISPLAY/DEMO)			
S621	1-554-303-21	SWITCH, TACTILE (POWER)			
S622	1-554-303-21	SWITCH, TACTILE (CLOCK SET)			
S623	1-554-303-21	SWITCH, TACTILE (REC)			
S624	1-554-303-21	SWITCH, TACTILE (DAILY 1)			
S625	1-554-303-21	SWITCH, TACTILE (DAILY 2)			
S626	1-554-303-21	SWITCH, TACTILE (SLEEP)			
S628	1-554-303-21	SWITCH, TACTILE (WAVE)			
S629	1-554-303-21	SWITCH, TACTILE (KARAOKE PON/MPX)			
S630	1-554-303-21	SWITCH, TACTILE (SURROUND)			
S631	1-554-303-21	SWITCH, TACTILE (P FILE MEMORY)			
S632	1-554-303-21	SWITCH, TACTILE (KEY CONTROL ♯)			
S633	1-554-303-21	SWITCH, TACTILE (KEY CONTROL ♭)			
S701	1-473-392-11	ENCODER, ROTARY (VOLUME)			
		< VIBRATOR >			
X601	1-579-125-11	VIBRATOR, CERAMIC (8MHz)			
**********					
*	A-4403-888-A	POWER AMP BOARD, COMPLETE (XB44K)			
		**********			
*	A-4403-912-A	POWER AMP BOARD, COMPLETE (XB33K)			
		**********			
		< CAPACITOR >			
C801	1-128-582-11	ELECT	10uF	20%	100V
C802	1-162-286-21	CERAMIC	220PF	10%	50V
C803	1-162-282-31	CERAMIC	100PF	10%	50V
C804	1-126-967-11	ELECT	47uF	20%	50V
C806	1-126-967-11	ELECT	47uF	20%	50V
C807	1-128-560-11	ELECT	22uF	20%	100V
C809	1-128-560-11	ELECT	22uF	20%	100V
C810	1-164-159-21	CERAMIC	0.1uF		50V
C811	1-130-493-00	MYLAR	0.068uF	5%	50V
C812	1-130-493-00	MYLAR	0.068uF	5%	50V

POWER AMP | TABLE SENSOR | TC-A SW

Ref. No.	Part No.	Description			Remarks
C814	1-162-294-31	CERAMIC	0.001uF	10%	50V
C841	1-126-925-11	ELECT	470uF	20%	10V
C851	1-128-582-11	ELECT	10uF	20%	100V
C852	1-162-286-21	CERAMIC	220PF	10%	50V
C853	1-162-282-31	CERAMIC	100PF	10%	50V
C854	1-126-967-11	ELECT	47uF	20%	50V
C856	1-126-967-11	ELECT	47uF	20%	50V
C857	1-128-560-11	ELECT	22uF	20%	100V
C861	1-130-493-00	MYLAR	0.068uF	5%	50V
C862	1-130-493-00	MYLAR	0.068uF	5%	50V
C901	1-117-750-11	ELECT	3300uF	20%	63V (XB33K)
C901	1-128-493-11	ELECT	4700uF	20%	71V (XB44K)
C902	1-130-777-00	FILM	0.1uF	10%	100V
C951	1-117-750-11	ELECT	3300uF	20%	63V (XB33K)
C951	1-128-493-11	ELECT	4700uF	20%	71V (XB44K)
C952	1-130-777-00	FILM	0.1uF	10%	100V
		< CONNECTOR >			
CN801	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P			
		< DIODE >			
D801	8-719-991-33	DIODE 1SS133T-77			
D841	8-719-991-33	DIODE 1SS133T-77			
D842	8-719-991-33	DIODE 1SS133T-77			
D851	8-719-991-33	DIODE 1SS133T-77			
D901	8-719-510-68	DIODE D5SBA204101			
		< IC >			
IC801	8-749-921-68	IC STK4231MK2			
		< TRANSISTOR >			
Q801	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
Q851	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA			
		< RESISTOR >			
R801	1-249-417-11	CARBON	1K	5%	1/4W F
R802	1-249-437-11	CARBON	47K	5%	1/4W
R803	1-249-413-11	CARBON	470	5%	1/4W F
R804	1-249-437-11	CARBON	47K	5%	1/4W (XB33K)
R804	1-249-438-11	CARBON	56K	5%	1/4W (XB44K)
R805	1-260-107-11	CARBON	4.7K	5%	1/2W
R806	1-260-107-11	CARBON	4.7K	5%	1/2W
⚠R807	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R808	1-220-893-11	METAL	0.22	10%	5W
R809	1-260-076-11	CARBON	10	5%	1/2W
R811	1-249-417-11	CARBON	1K	5%	1/4W F
R812	1-249-431-11	CARBON	15K	5%	1/4W
R813	1-249-441-11	CARBON	100K	5%	1/4W
R814	1-260-105-11	CARBON	3.3K	5%	1/2W
R816	1-260-105-11	CARBON	3.3K	5%	1/2W
⚠R820	1-202-972-61	FUSIBLE	1	5%	1/4W F
R841	1-249-426-11	CARBON	5.6K	5%	1/4W
R842	1-247-889-00	CARBON	270K	5%	1/4W
R843	1-249-421-11	CARBON	2.2K	5%	1/4W F
R844	1-249-429-11	CARBON	10K	5%	1/4W
R851	1-249-417-11	CARBON	1K	5%	1/4W F
R852	1-249-437-11	CARBON	47K	5%	1/4W
R853	1-249-413-11	CARBON	470	5%	1/4W F
R854	1-249-437-11	CARBON	47K	5%	1/4W (XB33K)
R854	1-249-438-11	CARBON	56K	5%	1/4W (XB44K)
R855	1-260-107-11	CARBON	4.7K	5%	1/2W
R856	1-260-107-11	CARBON	4.7K	5%	1/2W
⚠R857	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R858	1-220-893-11	METAL	0.22	10%	5W
R859	1-260-076-11	CARBON	10	5%	1/2W
R861	1-249-417-11	CARBON	1K	5%	1/4W F
R862	1-249-431-11	CARBON	15K	5%	1/4W
R863	1-249-441-11	CARBON	100K	5%	1/4W

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1-659-058-13	TABLE SENSOR BOARD	
	**********	
	< IC >	
IC202	8-749-924-18	IC PHOTO INTERRUPTER RPI-1391
	< RESISTOR >	
R207	1-249-416-11	CARBON 820 5% 1/4W

****

*	1-664-012-11	TC-A SW BOARD
		**********
		< CONNECTOR >
* CN612	1-568-943-11	PIN, CONNECTOR 5P
		< DIODE >
D631	8-719-057-10	DIODE LNJ301MPUJAB (▷)
D632	8-719-057-10	DIODE LNJ301MPUJAB (◁)
		< RESISTOR >
R705	1-249-415-11	CARBON 680 5% 1/4W F
R706	1-249-416-11	CARBON 820 5% 1/4W F
R707	1-249-418-11	CARBON 1.2K 5% 1/4W F
R708	1-249-419-11	CARBON 1.5K 5% 1/4W F
R709	1-249-421-11	CARBON 2.2K 5% 1/4W F
R710	1-247-843-11	CARBON 3.3K 5% 1/4W
R711	1-247-807-31	CARBON 100 5% 1/4W
R714	1-247-807-31	CARBON 100 5% 1/4W
		< SWITCH >
S641	1-554-303-21	SWITCH, TACTILE (▷)
S642	1-554-303-21	SWITCH, TACTILE (◁)
S643	1-554-303-21	SWITCH, TACTILE (■)
S644	1-554-303-21	SWITCH, TACTILE (◀◀)
S645	1-554-303-21	SWITCH, TACTILE (▶▶)
S646	1-554-303-21	SWITCH, TACTILE (DOLBY NR)
S647	1-554-303-21	SWITCH, TACTILE (DIRECTION)

****

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description				Remarks
*	1-664-013-11	TC-B SW BOARD				
		**********				
		< DIODE >				
D635	8-719-057-10	DIODE LNJ301MPUJAB (◁I)				
D636	8-719-057-10	DIODE LNJ301MPUJAB (I▷)				
D637	8-719-058-17	DIODE LNG401NPYJA (▮▮)				
D638	8-719-057-09	DIODE LNJ801LPDJA (● REC)				
		< RESISTOR >				
R715	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R716	1-247-843-11	CARBON	3.3K	5%	1/4W	
R717	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R718	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R719	1-249-429-11	CARBON	10K	5%	1/4W	
R720	1-249-432-11	CARBON	18K	5%	1/4W	
R721	1-249-436-11	CARBON	39K	5%	1/4W	
R722	1-247-881-00	CARBON	120K	5%	1/4W	
R724	1-247-807-31	CARBON	100	5%	1/4W	
R725	1-247-807-31	CARBON	100	5%	1/4W	
R727	1-247-807-31	CARBON	100	5%	1/4W	
R728	1-247-807-31	CARBON	100	5%	1/4W	
		< SWITCH >				
S651	1-554-303-21	SWITCH, TACTILE (I▷)				
S652	1-554-303-21	SWITCH, TACTILE (◁I)				
S653	1-554-303-21	SWITCH, TACTILE (▶▶)				
S654	1-554-303-21	SWITCH, TACTILE (◀◀)				
S655	1-554-303-21	SWITCH, TACTILE (■)				
S656	1-554-303-21	SWITCH, TACTILE (▮▮)				
S657	1-554-303-21	SWITCH, TACTILE (● REC)				
S658	1-554-303-21	SWITCH, TACTILE (H SPEED DUB)				
S659	1-554-303-21	SWITCH, TACTILE (CD SYNC)				
**********						
*	1-668-169-11	TRANS BOARD				
		**********				
		< CONNECTOR >				
* CN901	1-564-522-11	PLUG, CONNECTOR 7P				
* CN902	1-564-518-11	PLUG, CONNECTOR 3P				
CN903	1-535-139-00	BASE POST 14MM (10MM PITCH) 2P (E, IA)				
CN903	1-774-108-11	PIN, CONNECTOR (PC BOARD) (EA, SP, MY)				
		< FUSE >				
F901	1-532-464-31	FUSE, TIME LAG (2.5A/250V)				
F902	1-532-505-31	FUSE, TIME LAG (5A/250V)				
		< FUSE HOLDER >				
FH901	1-533-399-11	HOLDER, FUSE				
FH902	1-533-399-11	HOLDER, FUSE				
FH951	1-533-399-11	HOLDER, FUSE				
FH952	1-533-399-11	HOLDER, FUSE				
		< RESISTOR >				
⚠R901	1-219-119-81	FUSIBLE	0.1	5%	1/4W	F
⚠R902	1-219-119-81	FUSIBLE	0.1	5%	1/4W	F
⚠R903	1-219-119-81	FUSIBLE	0.1	5%	1/4W	F
⚠R904	1-219-119-81	FUSIBLE	0.1	5%	1/4W	F

Ref. No.	Part No.	Description	Remarks
		< SWITCH >	
S901	1-762-753-11	SWITCH, VOLTAGE SELECTION	(VOLTAGE SELECTOR)
**********			
		**********	
		MISCELLANEOUS	
		**********	
4	1-233-545-11	ENCAPSULATED COMPONENT	
5	1-769-974-11	WIRE (FLAT TYPE) (13 CORE)	
7	1-698-792-11	FAN, DC (XB44K)	
58	1-773-161-11	WIRE (FLAT TYPE) (21 CORE)	
59	1-769-949-11	WIRE (FLAT TYPE) (11 CORE)	
120	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)	
156	1-777-868-11	WIRE (FLAT TYPE) (19 CORE)	
⚠159	1-569-007-11	ADAPTOR, CONVERSION 2P (E, IA)	
⚠159	1-569-008-11	ADAPTOR, CONVERSION 2P (AR)	
⚠CNP901	1-558-943-51	CORD, POWER (E/XB44K: IA)	
⚠CNP901	1-575-651-21	CORD, POWER (EA, SP, MY)	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECKA)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK B)	
M1	X-3371-223-1	MOTOR ASSY, CAPSTAN	
M2	A-2004-410-A	MOTTOR ASSY, DC (TRIGGER)	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M201	A-4660-977-A	MOTOR ASSY (TABLE)	
⚠T901	1-431-635-11	TRANSFORMER, POWER (XB33K)	
⚠T901	1-431-637-11	TRANSFORMER, POWER (XB44K)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-475-115-31	COMMANDER, STANDARD (RM-SD70S)	
	1-501-374-11	ANTENNA, LOOP	
	1-501-659-41	ANTENNA (FM)	
	3-862-180-11	MANUAL, INSTRUCTION(ENGLISH)	
	3-862-180-31	MANUAL, INSTRUCTION (XB33K/XB44K: E, EA,SP,MY)(FRENCE, SPANISH)	
	3-862-180-41	MANUAL, INSTRUCTION (E, EA, SP, IA)	(CHINESE)
	3-862-180-91	MANUAL, INSTRUCTION (EA) (ARABIC)	
	4-991-151-01	COVER, BATTERY (for RM-SD70S)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-646-79	SCREW +BVTP 3 × 8 TYPE2 N-S	
#2	7-685-871-01	SCREW +BVTT 3 × 6 (S)	
#3	7-685-872-09	SCREW +BVTT 3 × 8 (S)	
#4	7-685-650-79	SCREW +BVTP 3 × 16 TYPE2 N-S	
#5	7-685-862-09	SCREW +BVTT 2.6 × 6 (S)	
#6	7-685-131-19	SCREW +BTP 2.6 × 4 TYPE2 N-S	
#7	7-685-533-19	SCREW +BTP 2.6 × 6 TYPE2 N-S	
#8	7-621-775-10	SCREW +B 2.6 × 4	
#9	7-685-534-19	SCREW +BTP 2.6 × 8 TYPE2 N-S	
#10	7-623-921-01	RING, RETAINING, CAPSTAN	
#11	7-621-775-00	SCREW +B 2.6 × 3	
#12	7-621-255-15	SCREW +P 2 × 3	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-922-825-11

Sony Corporation
Home A&V Products Company

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